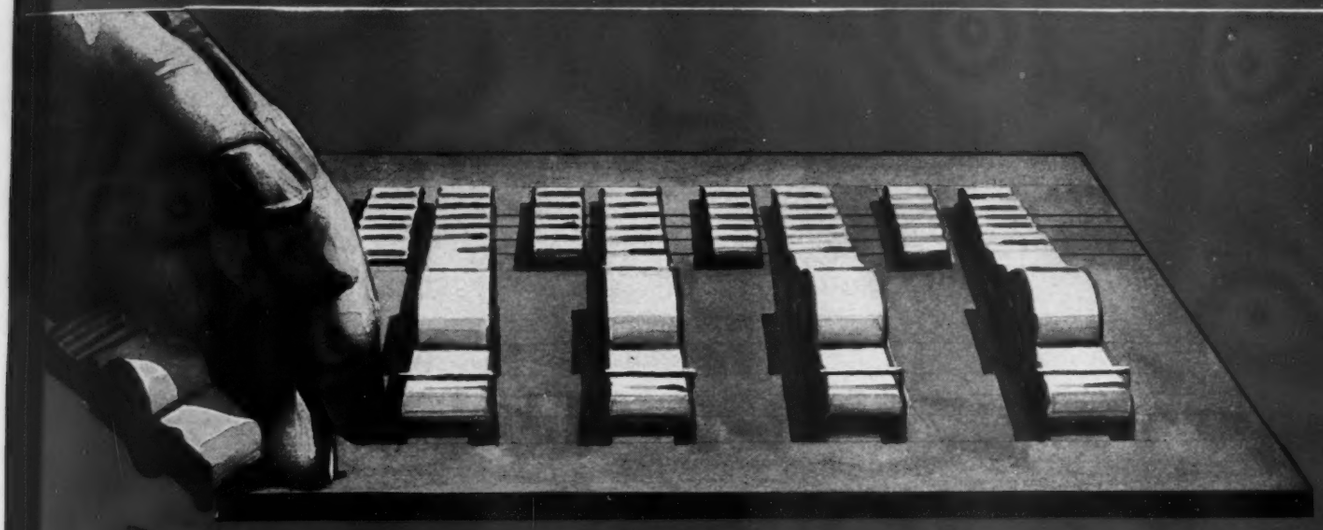
MAY, 1935

COTTON

Serving the

TEXTILE INDUSTRIES



4 new slashers replace 8!

In a large northern mill where 4 Saco-Lowell High Speed Slashers are replacing 8 old slashers in sizing 500,000 to 600,000 yards per week, they report:

1. Present speed 42 yds. per minute; formerly 20.
2. Net production 33 yds. per minute; formerly 15.
3. Weave room efficiency increased 2% because of better and more even sizing, controlled stretch, and more uniform beams.
4. 2% saving in cotton through holding numbers to final size in spinning, made possible by eliminating excessive shedding at loom.
5. Their net annual return is 100% on the investment.

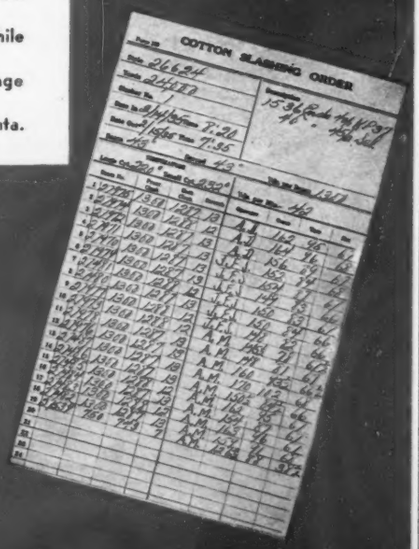
Three outstanding features of the New S-L Slashing are:

a. Positive feed device controls stretch to any amount from zero up, with absolute uniformity on every loom beam. See actual card record at right.

b. Double creel which permits pattern sets to be counted and leased while machine is running.

c. Completely automatic control of temperatures on size cooking and storage kettles, and on drying cylinders.

For details, write Saco-Lowell Shops, Boston, Charlotte, Greenville, Atlanta.



SACO-LOWELL
HIGH-SPEED SLASHING

One hypodermic injection every day for two weeks. Thus simply and quickly are thousands each year made immune to the dread disease of rabies. However Louis Pasteur worked steadily for FIVE YEARS on this one problem (to say nothing of 15 or 20 years of previous experience), before he announced his now famous "treatment" to the world.

EXPERIENCE MADE BOTH POSSIBLE

Great achievements in any field, once recognized, are always taken for granted, with little thought of the many years of research and experience that made them possible.

Franklin Process Colors are now specified or ordered as a matter of routine by a majority of converters and manufacturers of cotton yarn dyed fancies. Because these colors are dyed in Franklin Process PACKAGE Dyeing Machines, many give full credit for the superiority of Franklin Process Service to the TYPE of MACHINE, and assume that any dyer, using package dyeing machines, can match Franklin Process achievements.

Package Dyeing machines (properly designed) are undoubtedly a big advance over older types of yarn dyeing equipment. However they are only partly responsible for Franklin Process leadership. Back of this leadership, to an equal extent, are 25 years of organization, research and good management.

As a result of these activities, Franklin Process offers not only superior equipment, but also a superior knowledge of dyestuffs, of the methods of application, and of market requirements. Hence customers frequently get better colors within their price range, or more marketable colors, both as to price and quality, than would otherwise be the case.

Experience, above all else, has made such service possible. It can not be duplicated overnight. Achievement is always born of experience. Therefore if you want the best in yarn dyeing service, from all standpoints, look to—

Custom Yarn Dyeing

Natural Yarns **Colored Yarns**

Glazed Yarns

Dyeing and Processing Machines

When you pay for colors of KNOWN fastness, advertise the fact. Use the Franklin Process Fast Color Label. Ask us about it.

FRANKLIN PROCESS

ESTABLISHED 1910

Pioneers in Package Dyeing

PROVIDENCE • PHILADELPHIA • GREENVILLE • CHATTANOOGA • N. Y. REPRESENTATIVE, 40 WORTH ST.

COTTON is published monthly by W. R. C. Smith Publishing Co., Dalton and Atlanta, Ga. Subscription Rates, United States and Possessions, $1.00 for one year; $2.00 for three years; Canada, $1.50 per year; Foreign Countries, $2.00 per year. Entered as second-class matter at the postoffice, Dalton, Ga., under the Act of March 3, 1879.

When You Buy Loom Repair Parts

Do You Buy

A Casting?

Or A Casting Plus Service?

A Good Molder Can Make a Casting to Replace a Worn or Broken Part on a Loom

It Will Look Like That Part

It May Fit—It May Not

It May Be Wrong in Some Vital Essential—It May Not

But the Molder Does Not Follow His Casting into Your Mill

He Assumes No Responsibility

He Gives No Service

When You Buy Draper Repair Parts You Buy the Same Parts We Use for New Looms—They Fit—They Keep Your Looms Running Like New Looms

Our Service Men Follow Them into Your Mill—Are Always on Call—They and We Assume Responsibility

A Casting Is a Piece of Iron

A Casting with Service Helps Your Mill over Many Difficulties

DRAPER CORPORATION

Hopedale Massachusetts

Southern Offices Atlanta Ga and Spartanburg S C

"Price doesn't tell you what an oil will do." But the cost of lubrication in your mill *is* seen in your yardage costs per loom. Why be content with lubricants that may save you a few cents on purchase price? They may add dollars in higher power costs, unnecessary repair and maintenance expense, mechanical failures, excessive spoilage.

$18,000 less for power

In one well-known Southern mill, Texaco engineers demonstrated that Texaco *tested* Lubricants would make a saving of 18 cents per spindle, per year. With 100,000 spindles, that small saving reached the important sum of $18,000. And troubles due to spindle wabble and staining were practically eliminated.

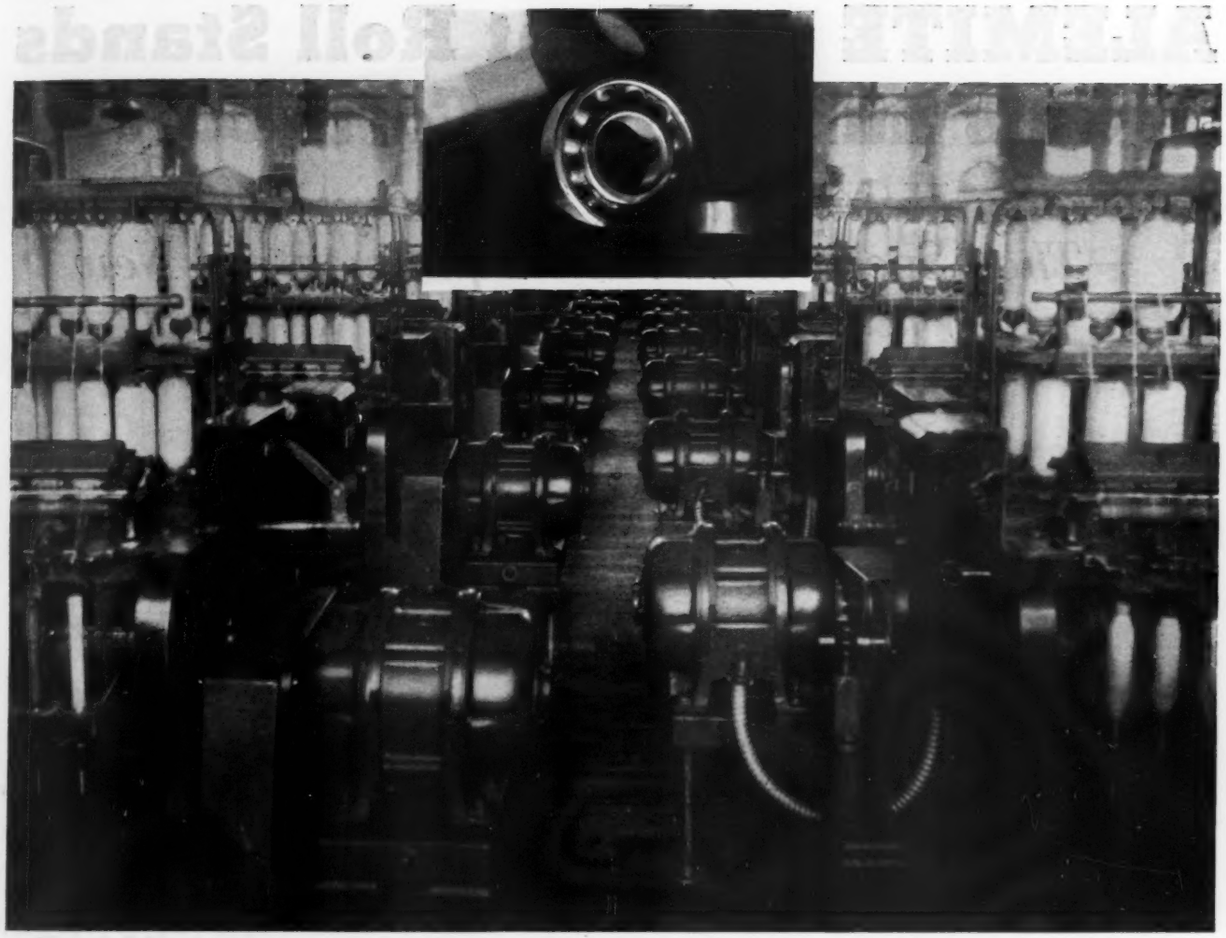
"Modernized" by methods

In many other mills Texaco has been helpful in devising a "modernization" of lubrication methods. This has required no capital outlay. But it has had the valuable effect of lowering the "cost per yard." It would be a good business move to let Texaco cooperate with your men. The friendly, helpful service which Texaco lubrication engineers can give to your men will aid *them* to discover how to get *more lubrication at less cost.* This service is yours for the asking.

THE TEXAS COMPANY
135 East 42nd Street • New York City
Nation-wide distribution facilities assure prompt delivery

TEXACO *tested* LUBRICANTS

REFINERY TESTED FOR UNIFORMITY • • • SERVICE TESTED FOR ECONOMY



Every leak is a loss . . . worth stopping

A BEARING LEAK is very often the sign of a profit leak, because the dripping oil creates a fire hazard, spoils materials and means frequent replenishment. Motors equipped with New Departure Ball Bearings do not leak, because grease is used as a lubricant and simple seals retain it. These same seals protect the bearings from lint and dirt. Lubricant expense with New Departures is almost nothing, just one greasing each year. Burnouts are seldom experienced with them because of their rigid, accurate support of the central motor member. Stop the leaks. Use New Departures. A copy of our latest catalog is yours for the asking. The New Departure Mfg. Co., Bristol, Connecticut. Southern Representative, E. M. Potter, 913 First National Bank Bldg., Charlotte, North Carolina.

NEW DEPARTURE

2221 **BALL BEARINGS**

ALEMITE on Front Roll Stands Cuts Lubrication Costs 66%

Proximity Manufacturing Company Proved This —Then Specified Alemite Equipment on New Whitin Machines!

● These photographs show the method of lubricating Front Roll Stands on Whitin Spinning Frames now in use at Proximity Mfg. Co., Greensboro, N. C., mill. Note cleanliness and ease of servicing bearings. For bearings of this type Alemite Lubrication Engineers recommend Alemite Temprite No. 33 E.P.—a pure, solidified oil that remains plastic in the bearing—won't splash or run.

ONCE again the Alemite Lubrication System has proved its superiority in the textile industry. This time it has answered one of the hardest problems in the field—the proper lubrication of Front Roll Stands on Long Draft Spinning Frames.

To test the efficiency of Alemite, the Proximity Manufacturing Company of Greensboro, N. C., first tried it on equipment that was formerly serviced by old, uncertain, squirt-can methods. They immediately noticed that Front Roll Stands which needed oiling every eight hours required Alemite lubrication only twice a week. They noticed, too, that Alemite eliminated costly oil contamination of the yarn and that the calf-skin rolls were not subject to oil soaking which had previously required their costly replacement. With this convincing first-hand proof of Alemite economy and efficiency, they ordered it as original equipment on new Whitin Spinning Frames.

This is just one of hundreds of cases where Alemite is making substantial new savings for textile mill operators—either when installed by a simple change-over that eliminates dirty, "gummy," lint-filled oil holes and inadequate oil cups, or when supplied as original equipment by major manufacturers.

At no cost or obligation you can have an Alemite Lubrication Engineer make an analysis of *your* lubrication requirements and make free recommendations that will save you money on labor, lubricant and repairs—show you how you can adapt Alemite to Looms, Carding Machines, Winders, Pickers, etc., without interrupting operation. Take advantage of this opportunity now. Simply address a note on your letterhead to:

ALEMITE CORPORATION
(Div. of Stewart-Warner Corp'n.)
1884 Diversey Parkway Chicago, Ill.

ALEMITE

Reg. U.S. Pat. Off.

Controlled Application of the Correct Lubricant

★ ★ ★

This man represents the cleanest, most effective and economical lubrication system in the world. He is working in hundreds of textile mills—saving money every minute. Does he work for you, too?

A MODERN FABLE ... with a Happy Ending

A SALES YARN mill found itself unable to make quality yarns at a COST that would LET THEM OUT. 30's carded ply yarns were manufactured by MORE MODERN MILLS at a price that permitted them to UNDERSELL. .

This mill was not LONESOME. It had plenty of COMPANIONS who were LOSING MONEY. But this did not make them so HAPPY, and they thought SOMETHING OUGHT TO BE DONE about it. So they called in sales engineers to DISCUSS WAYS and MEANS. .

Because they had an OLD FASHIONED IDEA about giving the customer a BREAK, they decided to use the same staple and character of cotton. So they called for a NEW DEAL. As they did their own SHUFFLING, there were no LOOSE ACES in anybody's SLEEVE. . .

They made a careful REORGANIZATION, with lighter carding, larger roving packages, new, wide gauge spinning with long draft, and larger twister packages. By rearranging their MACHINERY, they were not obliged to add any NEW BUILDINGS. IN NO TIME AT ALL they were operating on the NEW BASIS. .

After three months they reported CLEANER and MORE EVEN card sliver. One-quarter of the roving spindles were DONE AWAY WITH, but the spinning creels were furnished with LARGER and MORE EFFICIENT roving bobbins. Their YARN PRODUCTION was 45 per cent GREATER, with only 21 per cent more spindles, and they put 69 per cent more yarn on the spinning bobbins. . . . . .

Speed of the front rolls on their spinning was 30 per cent GREATER than BEFORE. .

The DIRECT and INDIRECT LABOR COST was reduced 40 per cent. . . . . .

Their OVERHEAD was cut by 45 per cent. .

The breaking strength of their yarn was increased 5 per cent and was much more EVEN.

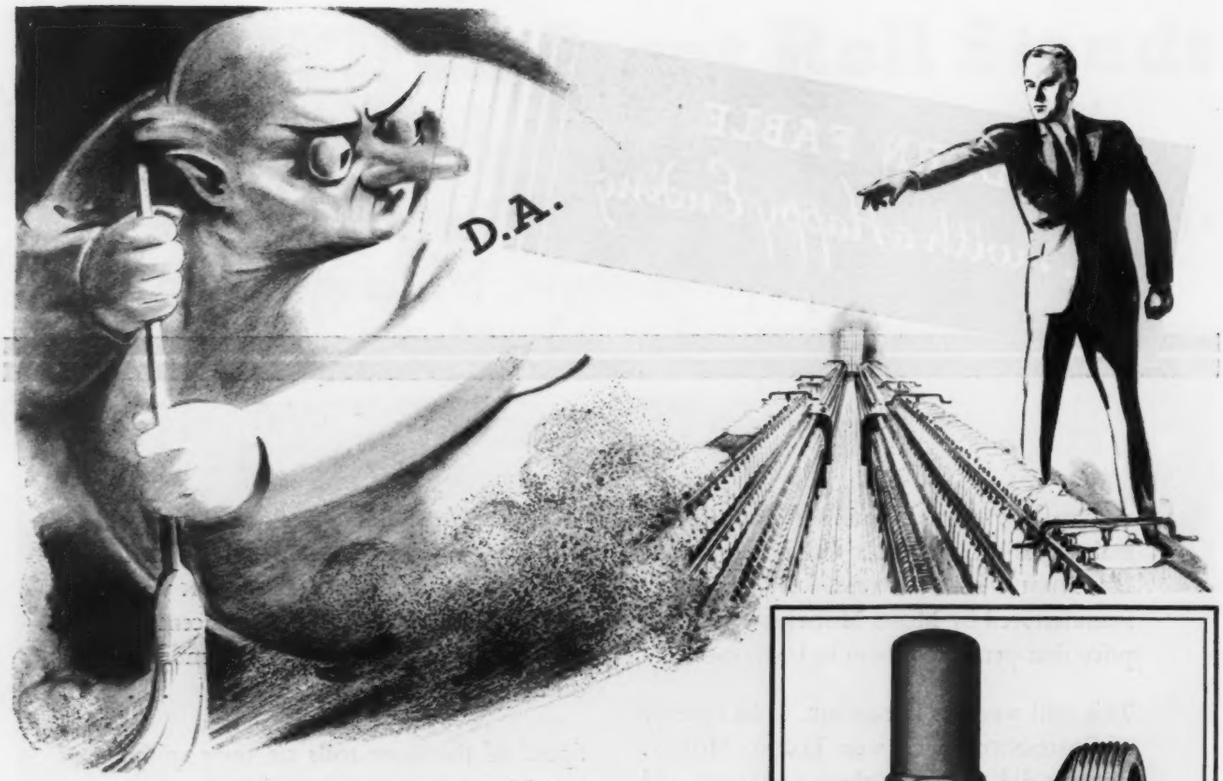
In other words, the mill is now in a position to STAY with the MARKET. They have SOMETHING TO BITE ON, while waiting for the MORE ABUNDANT LIFE to gelatin, which doesn't make them TOO UNHAPPY. . . .

And as every good story must have a MORAL, but without personal reflections on our very good friends who could SEE a GOOD THING, here it is: . . . . . .

"They said it couldn't be done; but he, poor fool, didn't know it, so he went ahead and did it."

WHITIN MACHINE WORKS

CHARLOTTE • WHITINSVILLE, MASS. • ATLANTA



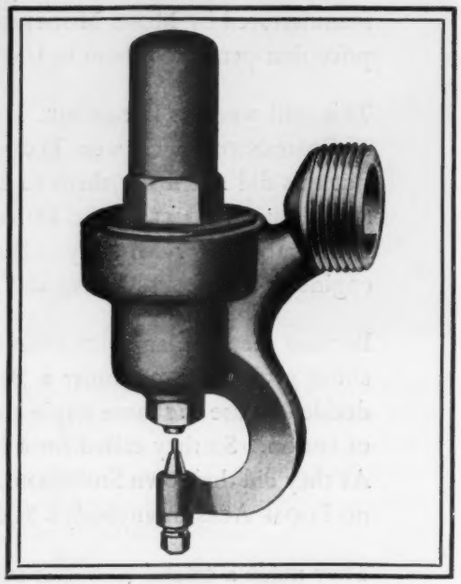
D. A.
DRY AIR

BREEDER OF DUST AND FLY

The irritating blanket of dust and fly ever present in Dry Air causes increasing discomfort to workers, slows up production and deposits itself upon machinery and work in process.

Dust and fly with their resulting ill effects are reduced to a minimum with the presence of Adequate Humidification.

Adequate Humidification is a technical problem involving many and varying factors. How well AMCO Engineering and AMCO Equipment have solved these problems is attested by their leadership for over 47 years.



AMCO

Self-Cleaning Humidifier Nozzle

A nozzle which automatically rids itself of accumulated dirt and foreign matter each time the water supply to the humidifier is turned off. Full, uninterrupted, perfect delivery of atomized spray is assured.

Catalog describing AMCO Equipment is readily available

IF IT'S A PROBLEM OF HUMIDIFICATION CALL IN THE AMCO ENGINEER

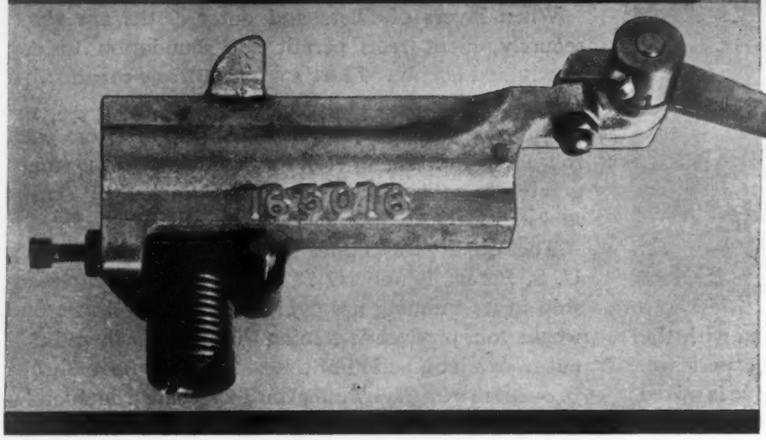
AMERICAN MOISTENING COMPANY

Established 1888

BOSTON, MASS. ATLANTA, GA. PROVIDENCE, RHODE ISLAND CHARLOTTE, N. C. GREENVILLE, S. C.

Two New C & K Feeler Motions

...as Sensitive as a Cat's Whisker



No. 21 Feeler is of the electro-mechanical type... primarily for use on silk, rayon and fine cotton counts. Designed principally for operation in connection with an electrical warp stop. A few simple additional parts will permit its application to looms equipped with mechanical warp stop motions.

We believe it to have the lightest touch of any feeler on the market. It has superior and lasting electrical contact through two platinum iridium points. A renewable bronze bushing (with oil wick) is located at the one point of possible wear.

No. 23 Feeler is a side slip feeler which can be immediately mounted in place of C & K No. 4, double contact feeler... without any change of stands, transfer arms, chopper, or other parts.

These new feelers supplement our regular line including the much used No. 18 two-prong electric. They were conceived and developed as a result of specific mill needs and have been thoroughly mill tested. For further information about these feelers or any particular problem which you may have... write to us.

Look on us as your associate in the Textile Industry

CROMPTON & KNOWLES LOOM WORKS

LOOMS FOR COTTONS, SILKS, RAYONS, WOOLENS, CARPETS AND RUGS, BLANKETS, JACQUARD FABRICS, ASBESTOS, LINENS

Allentown Philadelphia WORCESTER, MASS. S. B. Alexander, So. Mgr., Charlotte

CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, RHODE ISLAND

TUFFER FOUNDATION QUALITY

Can't be Hurried!

Expert craftsmen build Tuffer Foundation with the rule-of-thumb method that comes from long experience. Each batch of the famous Tuffer oil-proof glue is mixed by knowledge instead of theory. Tuffer Foundation builders know the correct amount of each ingredient to use, and the correct time for stirring in heated kettles. They know by *feel* when Tuffer glue is the correct consistency.

With eagle-eye they inspect each inch of cloth before Tuffer Foundation is glued together. They scamper from top to ends of the gluing machine while cloth is being glued. The cloth must move at a certain speed to assure the correct set of the glue, and the glue must flow just so.

When layers of fillers and outer cloths are glued securely, giant reels permit the foundation to dry slowly and evenly. ***That's why Tuffer Foundation is pliable*** and always hugs the cylinder.

After slitting to desired widths, samples from each roll are tested to withstand a strain four to five times greater than the job they must do. ***That's why Tuffer lasts so long.***

The quality of Tuffer Foundation (protected by U. S. Patent Number 1,773,783) and the craftsmanship in its building are evident at the condenser end where your product is coming through day in and day out over a long period of time. ***That's where Tuffer proves its quality.*** Tuffer Card Clothing from foundation to final inspection of each wire point is fabricated with extreme care with careful supervision by trusted craftsmen.

Proper equipment makes work easier for your carders, speeds up production and produces more profits. Write or telegraph the nearest office when you need new cylinders, flats or fillets.

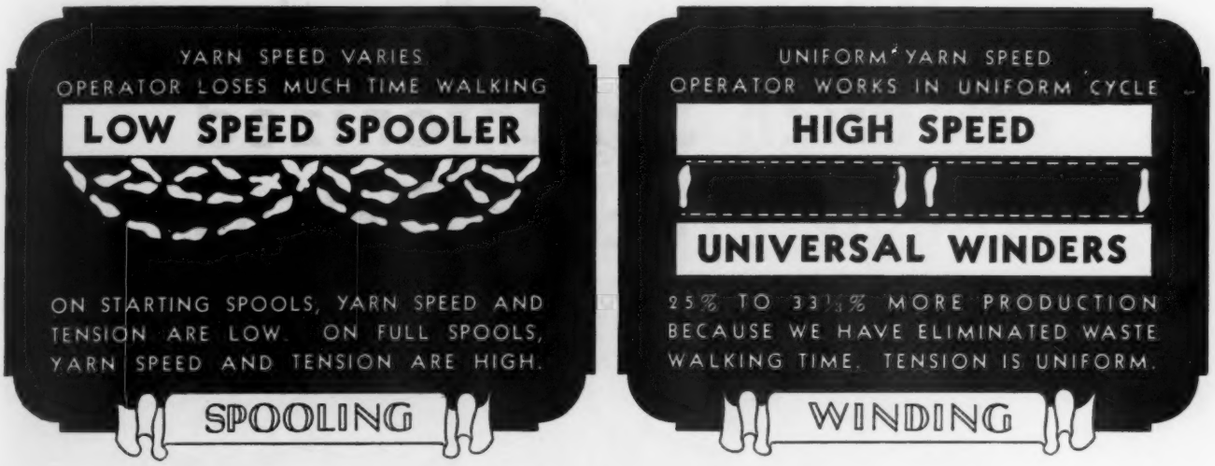
TUFFER CARD CLOTHING

HOWARD BROS. MFG. CO.

HOME OFFICE AND FACTORY: **WORCESTER, MASS.**

So. Plant: 244 Forsythe St., Atlanta, **Branch Offices:** Philadelphia, Dallas, Washington

Products: Fillets for Feed Rolls, Lickerins, Tumblers, Strippers, Workers, Doffers, Fancies, and Cylinders, Doffer Rings, Strickles, Emery Fillets, Burnisher Fillets, Top Flats Recovered and extra sets loaned, Lickerins Rewired at Southern Plant. Midgley Patented Hand Stripping Cards and Inserted Eye and Regular Wire Heddles


YARN SPEED VARIES
OPERATOR LOSES MUCH TIME WALKING
LOW SPEED SPOOLER
ON STARTING SPOOLS, YARN SPEED AND TENSION ARE LOW. ON FULL SPOOLS, YARN SPEED AND TENSION ARE HIGH.
SPOOLING
UNIFORM YARN SPEED
OPERATOR WORKS IN UNIFORM CYCLE
HIGH SPEED
UNIVERSAL WINDERS
25% TO 33⅓% MORE PRODUCTION BECAUSE WE HAVE ELIMINATED WASTE WALKING TIME. TENSION IS UNIFORM.
WINDING

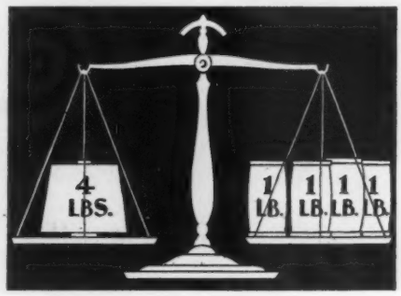
THE ROUTE THE OPERATOR WALKS IS A SOURCE OF *Waste* OR *Profit*

The operator of a Universal Winding Machine produces 25 to 33⅓% more than a spooler operator because the uniform yarn speed of the winder makes it possible for her to work in a uniform cycle—saving the thousands of footsteps which are simply a waste of production time.

The work of the operator is further simplified by the large 4-lb. cone replacing the small 1-lb. spools which allows more time for productive work. The larger package also saves 75% of the cost of creeling and 75% of the cost of trucking.

Any high speed system will bring savings over slow speed warping, but in 3 out of 4 mills, the Universal System of High Speed Coning and Warping gives a greater net return on the investment because, in addition to the reduction of non-productive time—

(1) it has the lowest investment cost



(2) depreciation cost, throughout the life of the machine, is lower than with any other system

(3) its maintenance cost runs less than $50.00 a year on a $10,000.00 investment.

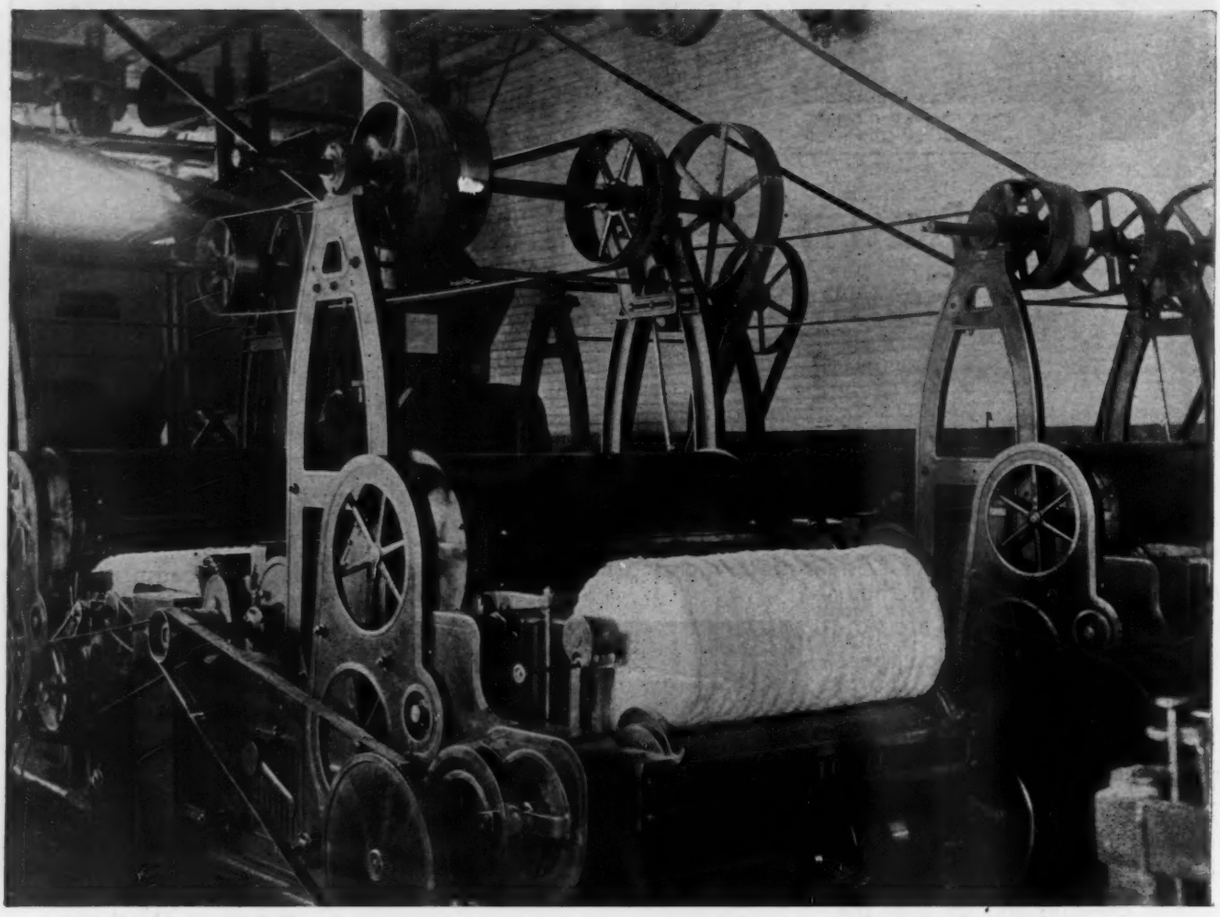
And, as far as weave room savings are concerned, loom stops are reduced because the natural elasticity of the yarn is retained, spooler kinks are eliminated, and lost and crossed ends in the loom beam are prevented by the electrically controlled stop motion on the warper.

In the light of these facts, an estimate of savings and investment will probably show that your mill will receive its greatest net return by investing in the Universal System. It will cost you nothing to find out. We suggest you address a letter to Dept. A, Boston, or the branch office nearest you.

IN 3 OUT OF 4 MILLS MORE NET RETURN
Universal System of High Speed Coning and Warping
UNIVERSAL WINDING COMPANY
BOSTON
NEW YORK · PHILADELPHIA · PROVIDENCE · SPRINGFIELD · UTICA · CHARLOTTE · ATLANTA

Modernize your Picker Room with

Aldrich Synchronized Single Process Picking



The most widely used single process picking system in the Textile Industry.

Simple—Inexpensive—Efficient—

Made and Installed by

AldricH MachinE

Greenwood, WorkS South Carolina

20 MINUTES FOR THE JOB

INSTEAD OF OVER THREE HOURS*

—that's a typical sample of the SAVINGS made by

SKILSAW

FOR MAINTENANCE

Rips out old flooring and cuts new flooring to size.

•

Does all kinds of sawing for remodeling work.

•

Saves on New Construction, general carpentry, concrete form work, bracing timbers.

•

Used for blocking freight car shipments and in the crating dept. and shipping platform.

*SKILSAW will rip out 60 feet of old maple flooring in 20 minutes. Time required for hand sawing is almost 4 hours!

- Will rip a 2" plank 12 ft. long in 20 seconds instead of four minutes required for hand work.
- Will cross cut ten 3x4 studs in 20 seconds instead of 2½ minutes.
- Will cut off 222 feet of ⅞" decking in 10 minutes instead of over 3 hours for hand sawing.

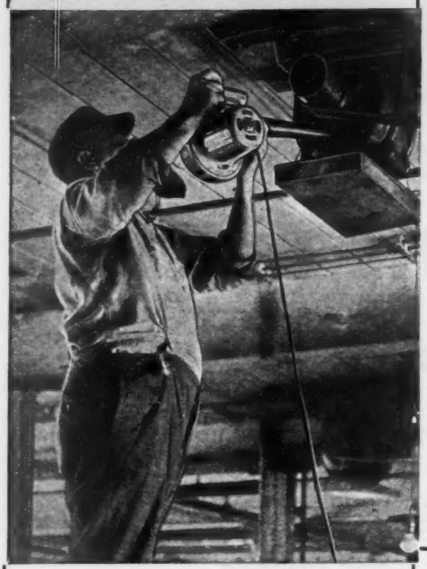
NO MORE HAND SAWING—SKILSAW DOES THE WORK ELECTRICALLY—TEN TIMES AS FAST!

Use Skilsaw wherever you used to saw by hand—and watch the savings mount up! Use Skilsaw instead of a stationary power saw wherever it is easier to bring the saw to the work than the work to the saw. Skilsaws are light, powerful, safe, and handy—and their extreme portability permits many valuable uses including: job carpentry and general maintenance, flooring repairs, form work, interior trim, shipping, crating, unpacking and heavy timber work as well as for industrial production on wood, stone, metals and composition materials. Fast, accurate, dependable. The acknowledged leader in quality and performance. Thousands in use.

Made in Six Powerful Models. Send for complete Information about the Application of Skilsaw for your Particular Type of Work.

SKILSAW BLOWERS and SUCTION CLEANERS

The Safest, Most Convenient Cleaning Method for Industry

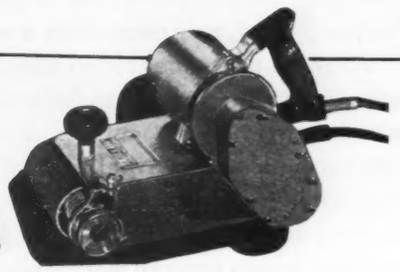


Powerful, Dependable, Easy to Handle.. Ideal for Textile Plant Maintenance Work.

• Cleans by DRY AIR at high *velocity* and comparatively low *pressure*—the method pronounced best by leading engineers. Used for Motors, Generators, Switches, Textile Machinery, Laundry Machinery, Stock Bins, Elevator Machinery, Business Machines and dozens of other purposes. Used either as Blowers or Suction Cleaners. Finest Ball Bearing Construction. Designed and made expressly for industrial purposes.

Instantly convertible for many other valuable uses. Many attachments for various types of cleaning are included as standard equipment. Special attachments convert into ideal Insecticide Blowers, Paint Sprayers or efficient Blow Torch Outfits.

Made in Five Powerful Models Including Hot and Cold Air Blower.



SKILSAW DRILLS

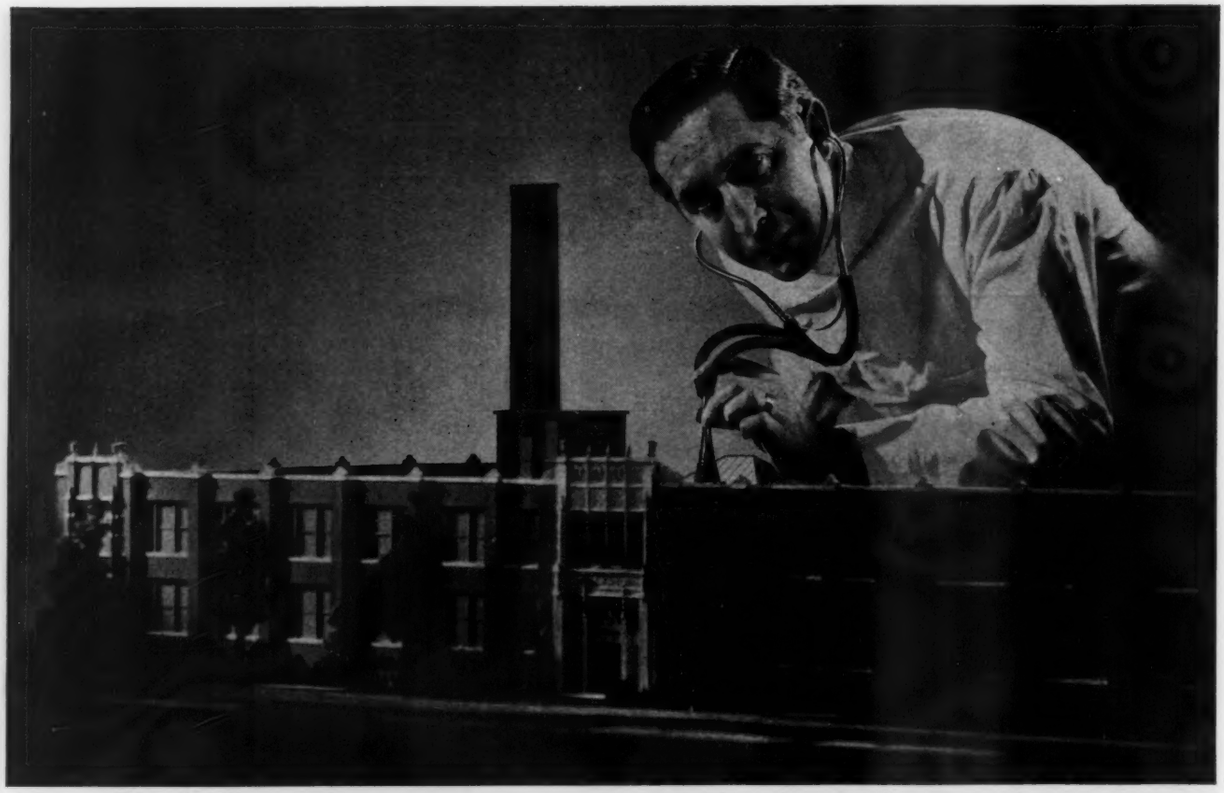
• Huskier — Smoother — Finer — Skilsaw Drills outstrip the field in performance. Full Ball Bearing construction. Die Cast Aluminum Alloy Bodies are finer, stronger. Extra powerful specially designed motors built for long life. Perfect in balance. Genuine Jacobs Chucks. Extra capacity Bakelite enclosed switches. Precision manufacturing throughout. *Made in Ten Powerful Models.*

SKILSAW SANDERS

• Makes great savings over hand Sanding and produces finer finishes faster. Refinishes work benches, tables, fixtures, cabinets, doors and partitioning. Also invaluable for floors and general maintenance work. Sands, grinds, and finishes wood, metal, stone, and composition materials. Light, Efficient, Powerful and Easy to use. *Made with and without Vacuum Dust Collector.*

Ask Your Distributor or Write Us for Complete New 1935 Catalog

SKILSAW, Inc., 3312 Elston Ave., Chicago, Ill.



YOUR ENGINEER IS THE DOCTOR . . . Accept His Diagnosis

• Your engineer is charged with the well-being of your plant. He knows the danger of that insidious "little ailment," the slight complication that, neglected, may necessitate a major operation.

When he prescribes for an ailment, give careful attention to his recommendations. Worn valves and fittings; faulty steam traps, pipe lines improperly sectionalized, prevent a plant from functioning to fullest efficiency.

Make a complete survey of all factory requirements to assure yourself that maximum productivity is being maintained with minimum operating costs.

A Tacoma institution following the recommendation of its engineer, installed new Crane piping, valves and fittings at a cost of $535.00 including both labor and materials. It reports savings of over $350.00 a year. There are thousands of similar instances of economic spending.

Call on Crane representatives to help your engineer. They can determine if piping changes are needed and the resultant savings. Our plant check-up list will be sent you without obligation. Write for it today. Remember too, that all Crane products are backed by the Crane insistence on precision and sturdiness. A practice that has persisted for four score years.

CRANE

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO, ILLINOIS NEW YORK: 23 W. 44TH STREET

Branches and Sales Offices in One Hundred and Sixty Cities

VALVES, FITTINGS, FABRICATED PIPE, PUMPS, HEATING AND PLUMBING MATERIAL

Equalled !!!

NATURE'S PURE WHITENESS

DULUX Mill White brings into your plant interior the pure whiteness of new-fallen snow. Here's a whiter, smoother, cleaner finish for walls and ceilings—that *stays* whiter and cleaner. Easy to apply. Quick-drying. Easy to clean as tile. Available in Gloss or Eggshell finish. DULUX means fewer repaintings . . . better light . . . faster production . . . less spoilage . . . greater savings.

Mail coupon for story on how to keep your plant clean and white at less cost.

See how du Pont uses cotton. Visit the Du Pont Exhibit, Memphis Cotton Carnival, May 6—11 . . . the South's Greatest Party

New

DU PONT REG. U. S. PAT. OFF. **DULUX** REG. U. S. PAT. OFF.

MILL WHITE

E. I. du Pont de Nemours & Co., Inc.
Finishes Division, Wilmington, Del.

I'll be glad to have your booklet, "DULUX Mill White." Send it to

Name.....

Company.....

City.....*State*.....

Position.....

IN this new booklet you will find the answer to many rayon soaking problems—from the correct ratio of oil to size, to the effect of embossing, or not embossing, on the finished fabric.

Based on 133 mill tests conducted by Nopco in a mill under actual production conditions, the information it contains is thoroughly *practical.* Mill men and throwsters will find this information new, vital and accurate—and extremely helpful.

Send for your copy of PEBBLE EFFECTS OF VARIOUS SOAKING TREATMENTS today! It is offered entirely free, as a part of Nopco's service in keeping you informed of the latest developments in the silk-rayon field. Use the coupon.

NOPCO

Members of Throwsters Research Institute

NATIONAL OIL PRODUCTS COMPANY

HARRISON, N. J. • BOSTON • CHICAGO • SAN FRANCISCO

NATIONAL OIL PRODUCTS CO.
Harrison, N. J.

Gentlemen: Please send me the FREE booklet, PEBBLE EFFECTS OF VARIOUS SOAKING TREATMENTS [C-5]

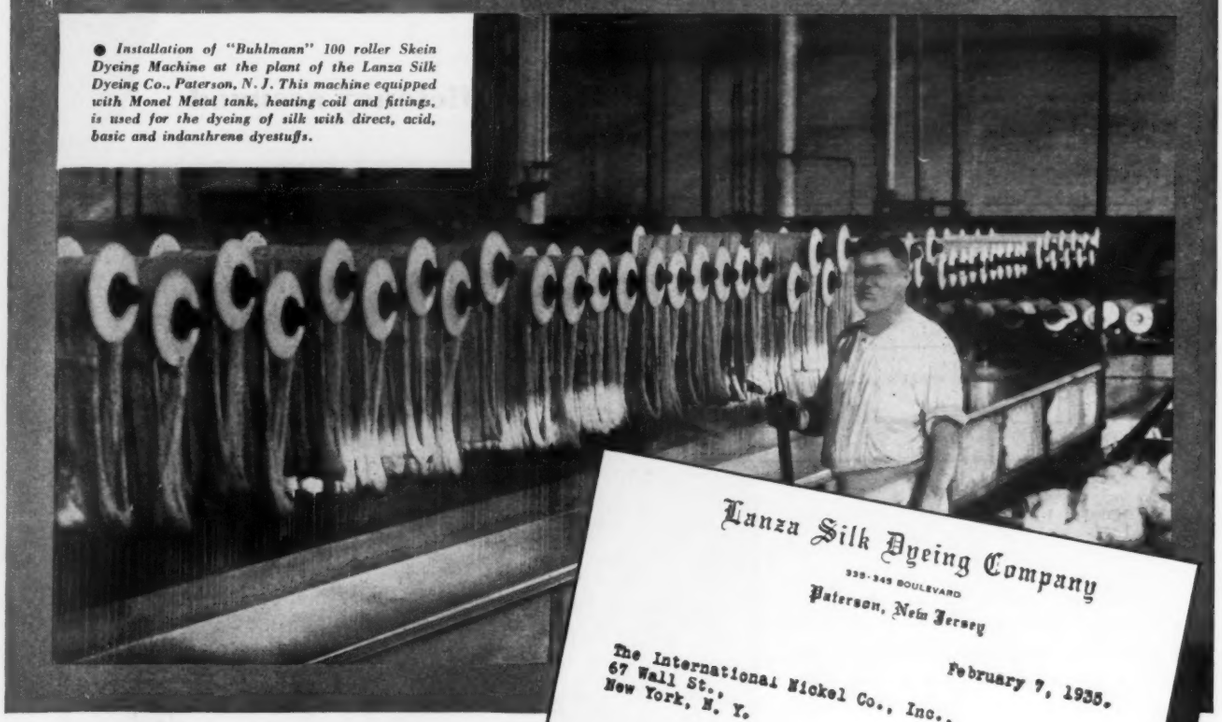
Name_____ Company_____ Address_____

MAIL THIS COUPON FOR FREE BOOKLET

"AS WE DISCARD OLD EQUIPMENT.. WE CHANGE TO MONEL METAL"

Lanza Silk Dyeing Company

● *Installation of "Buhlmann" 100 roller Skein Dyeing Machine at the plant of the Lanza Silk Dyeing Co., Paterson, N. J. This machine equipped with Monel Metal tank, heating coil and fittings, is used for the dyeing of silk with direct, acid, basic and indanthrene dyestuffs.*



Lanza Silk Dyeing Company
329-349 BOULEVARD
Paterson, New Jersey

February 7, 1935.

The International Nickel Co., Inc.,
67 Wall St.,
New York, N. Y.

Gentlemen:

For some years we have been using Monel Metal dye tubs which were installed with our Buhlmann 100 Reel Silk Skein Dyeing Machine and can only have the highest praise for such an installation.

We used wood and copper tubs for a long while, but since using Monel Metal tubs we find it of great convenience especially for cleanliness of the metal whereby we can change from dark to light colors with [illegible] trouble.

As we discard the old equipment we change to Monel Metal, not only because it is easier to clean, but also for its durability and we highly recommend it.

Very truly yours,

BJL:HS . LANZA SILK DYEING COMPANY.

B. J. Lanza

That's happening, also, in many other plants, for reasons only hinted at in Mr. Lanza's letter

EVERY TIME a color batch is changed, the user of Monel Metal has cause to be thankful. He saves time. He saves labor. For the dense, non-absorbent surfaces of Monel Metal absorb no dye material.

Monel Metal surfaces are always smooth and polished. Free from rust spots. Free from splinters and roughness. No chance to harm the most delicate fabrics.

And even years of hard use show little effect on Monel Metal. It is stronger than structural steel, tough, and durable.

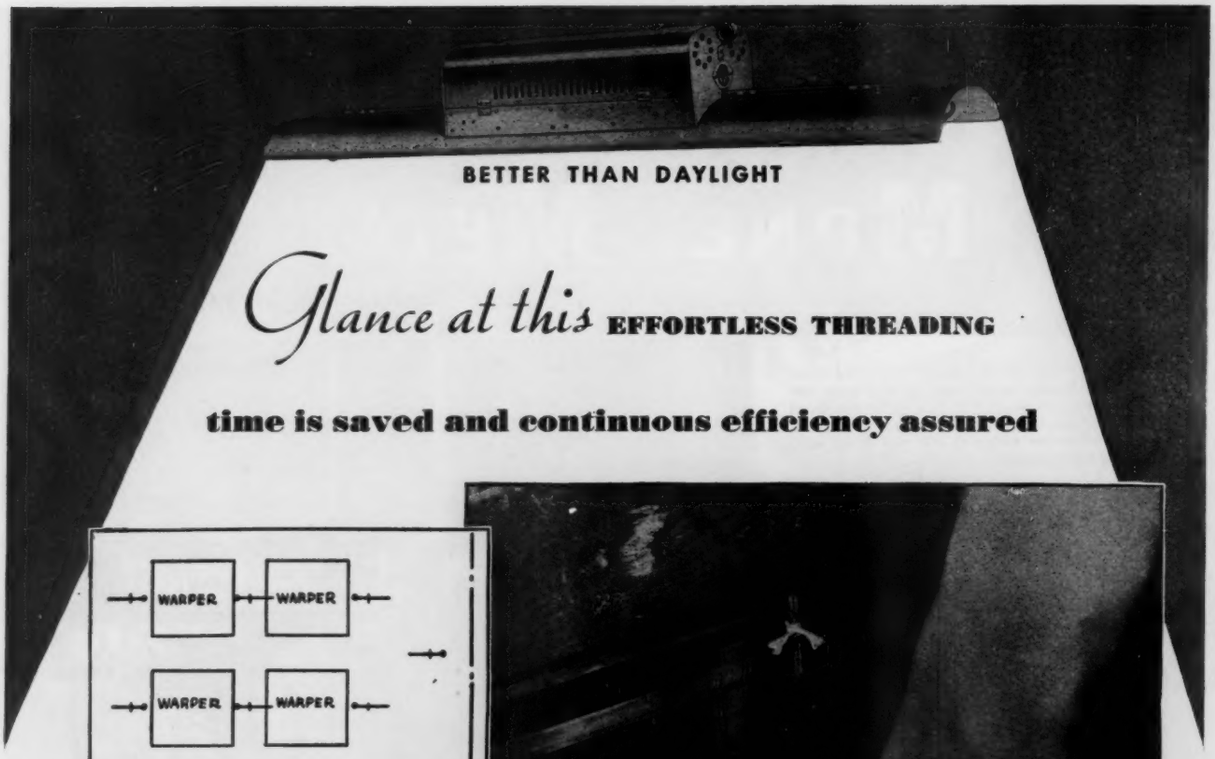
Get all the facts about Monel Metal in textile dyeing and finishing service. Write for literature and for the revised "Buyer's Guide of Monel Metal Textile Plant Equipment." Address

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York, N. Y.

MONEL METAL

Monel Metal is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third copper. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

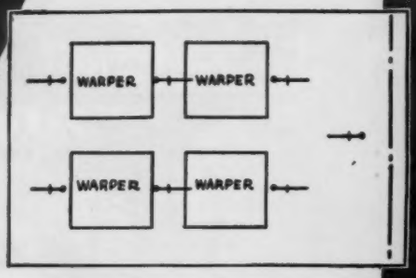
NRA CODE



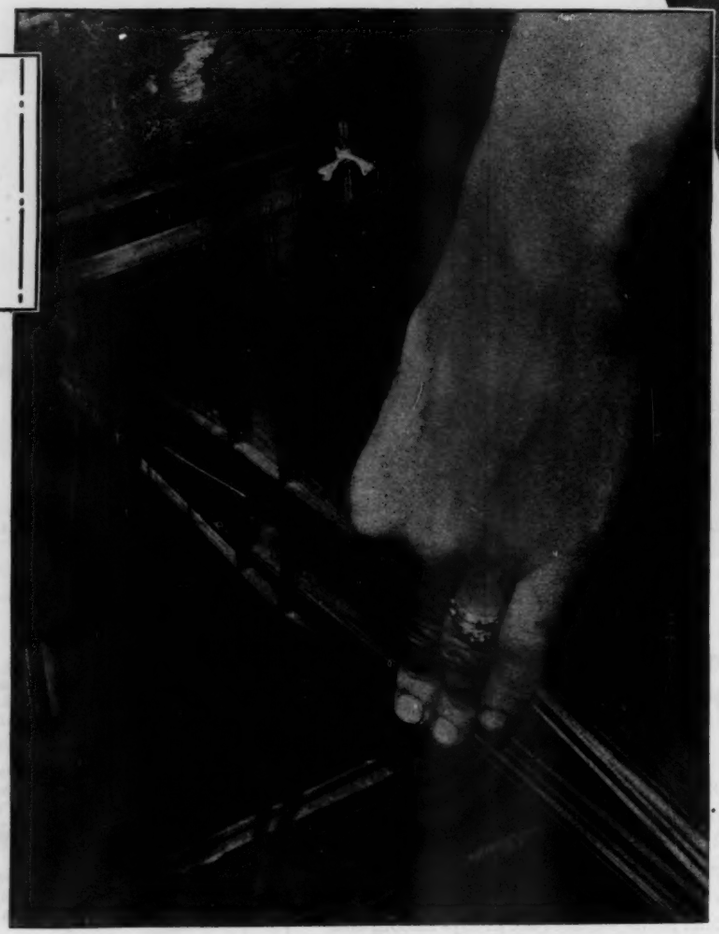
BETTER THAN DAYLIGHT

Glance at this **EFFORTLESS THREADING**

time is saved and continuous efficiency assured



SYMBOL: — —•
COOPER-HEWITT MERCURY VAPOR LAMP



Every thread is in bold relief under the penetrating light of Cooper-Hewitts. Quick, accurate vision follows with Cooper-Hewitts even under the small amount of light that can reach the out-of-the-way recesses of a warp harness. Threading is almost effortless. Eye strain is unknown. More economical production results and full efficiency is maintained day or night throughout the shift.

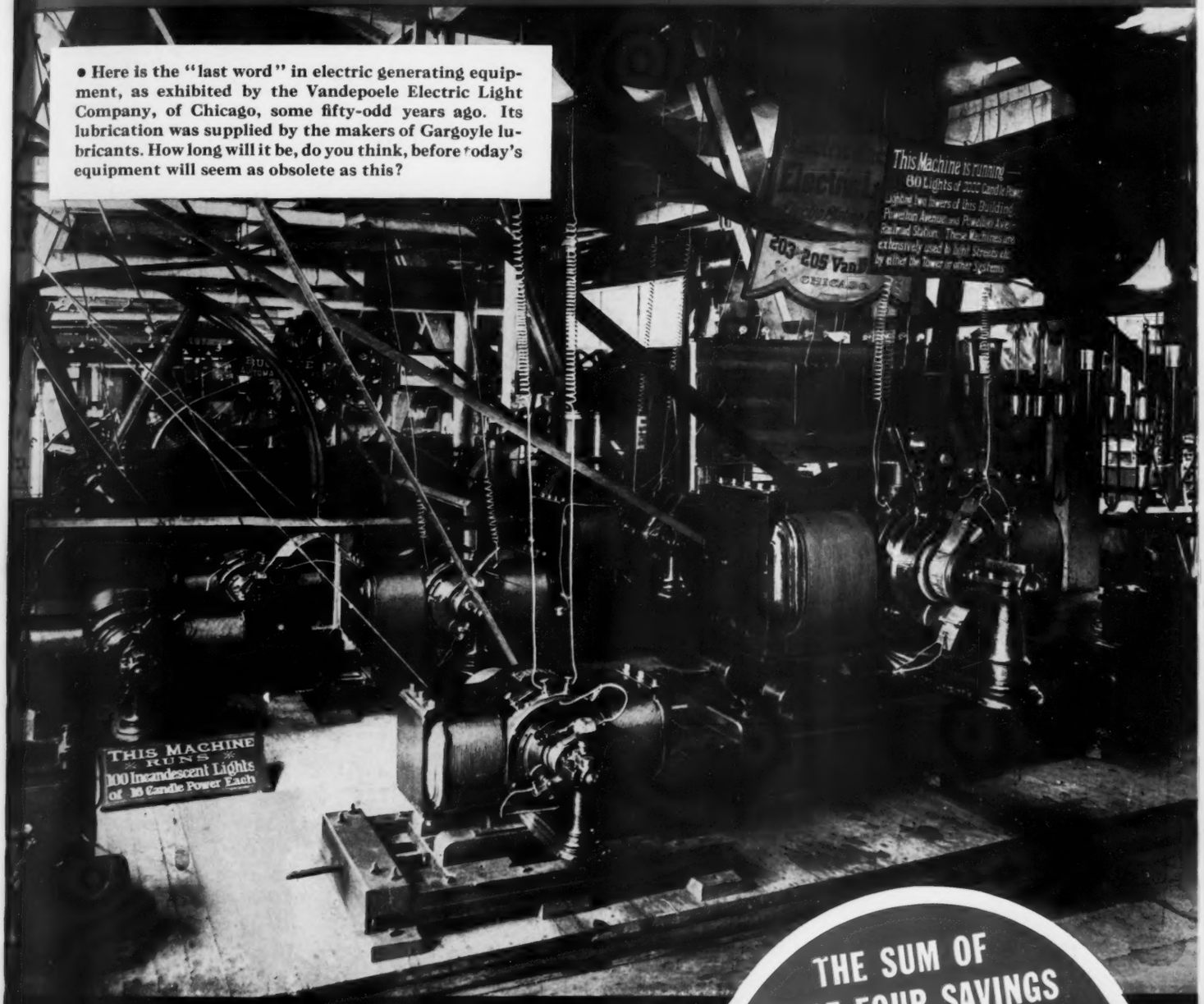
Small wonder that more than half of the larger silk mills have selected this fatigue reducing light. They save money through its use by reducing the time required for making adjustments, by assuring a uniform product, by minimizing rejects because workers see detail more quickly without fatiguing their eyes.

Gain uniform production regardless of outside light. Attract better weavers for the night shifts with Cooper-Hewitt light. We will gladly prove our claims in your most difficult lighting job. Such a trial will place you under no obligation to purchase . . . General Electric Vapor Lamp Co., 853 Adams Street, Hoboken, New Jersey.

GENERAL ELECTRIC VAPOR LAMP COMPANY

624 Copr. 1934, General Electric Vapor Lamp Co.

THEY CALLED IT *Modern*



• Here is the "last word" in electric generating equipment, as exhibited by the Vandepoele Electric Light Company, of Chicago, some fifty-odd years ago. Its lubrication was supplied by the makers of Gargoyle lubricants. How long will it be, do you think, before today's equipment will seem as obsolete as this?

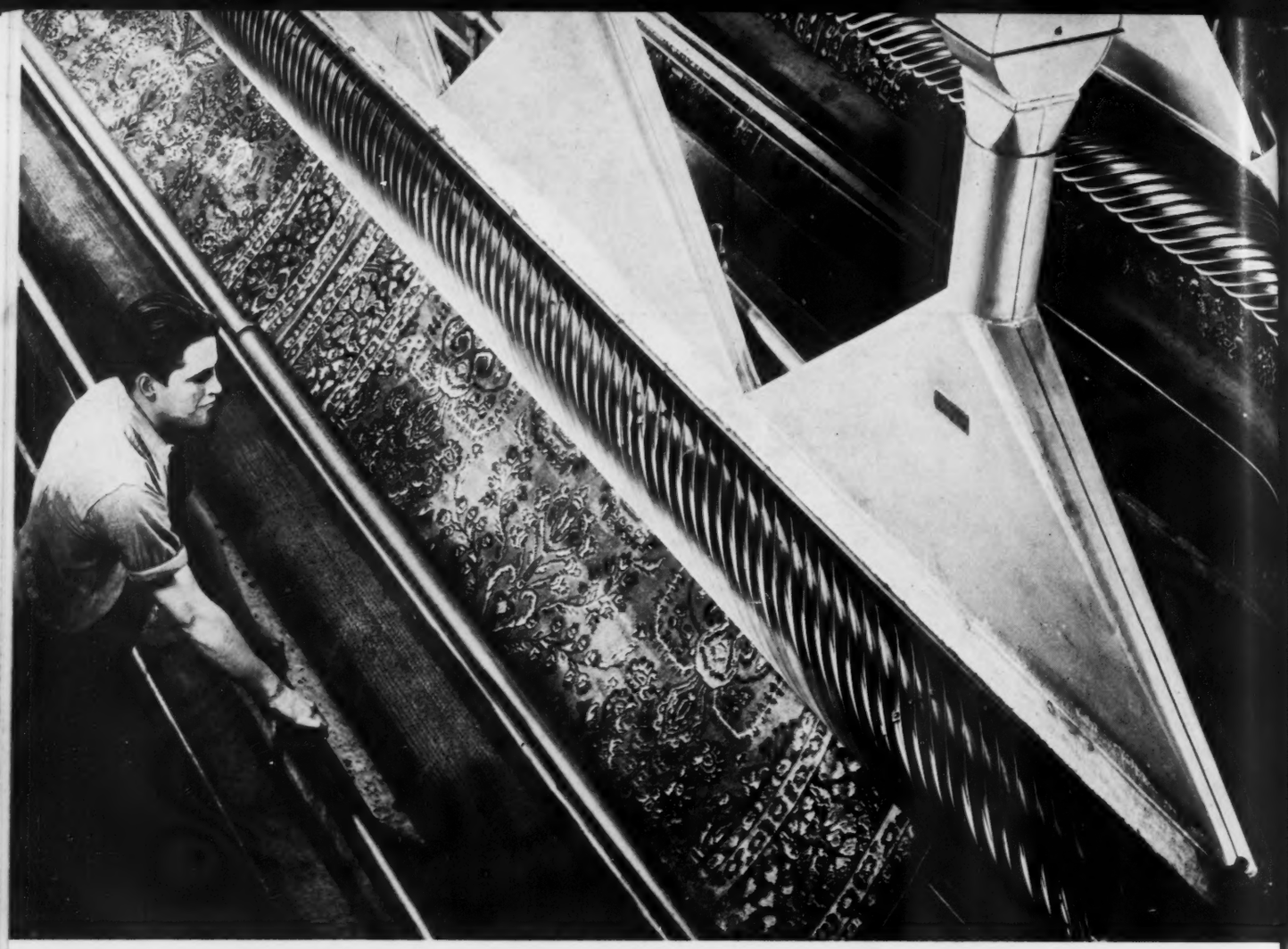
The Socony-Vacuum Engineer Says: Machines and Lubrication Methods go out of date. Take advantage of Modern Lubrication practice, show a Lubrication Profit in your Plant . . .

See Next Page

THE SUM OF THESE FOUR SAVINGS

1. REDUCED POWER CONSUMPTION
2. MORE CONTINUOUS PRODUCTION
3. DECREASED MAINTENANCE
4. LOWER LUBRICATION COSTS

= LUBRICATION PROFIT



Modernizing LUBRICATION PRACTICE IN THE TEXTILE INDUSTRY

DURING RECENT LEAN YEARS, many firms—perhaps yours—have retained machinery long beyond its day. It's been kept going with little care. Not from desire—but from a need to cut costs regardless of future costs thus incurred. Obsolescence by intent—this has been called.

Today, however, modernized, efficient competitors dictate that you modernize—equipment, methods, or both.

Correct lubrication had little part where conditions imposed "obsolescence by intent." During 1935, however, new thousands of American plants are taking steps to assure that correct lubrication shall yield for them the four-fold savings which constitute Lubrication Profit. For 69 years, the makers of Gargoyle lubricants have helped industry achieve this profit.

Today, Socony-Vacuum is in contact with over 2,500 equipment makers, actually influencing design... is being consulted by thousands of plants which are modernizing equipment or lubrication.

Socony-Vacuum Marketing Policy

Industry almost always finds that the controlled use of high-grade Gargoyle Lubricants pays for itself many times over and that they actually cost less to use than ordinary lubricants. But for such equipment as does not justify the highest-grade lubricants, Socony-Vacuum engineers will recommend a lower-priced lubricant consistent with true economy. Socony-Vacuum, with a complete line of products, can supply the lubricants best fitted for the individual lubricating job.

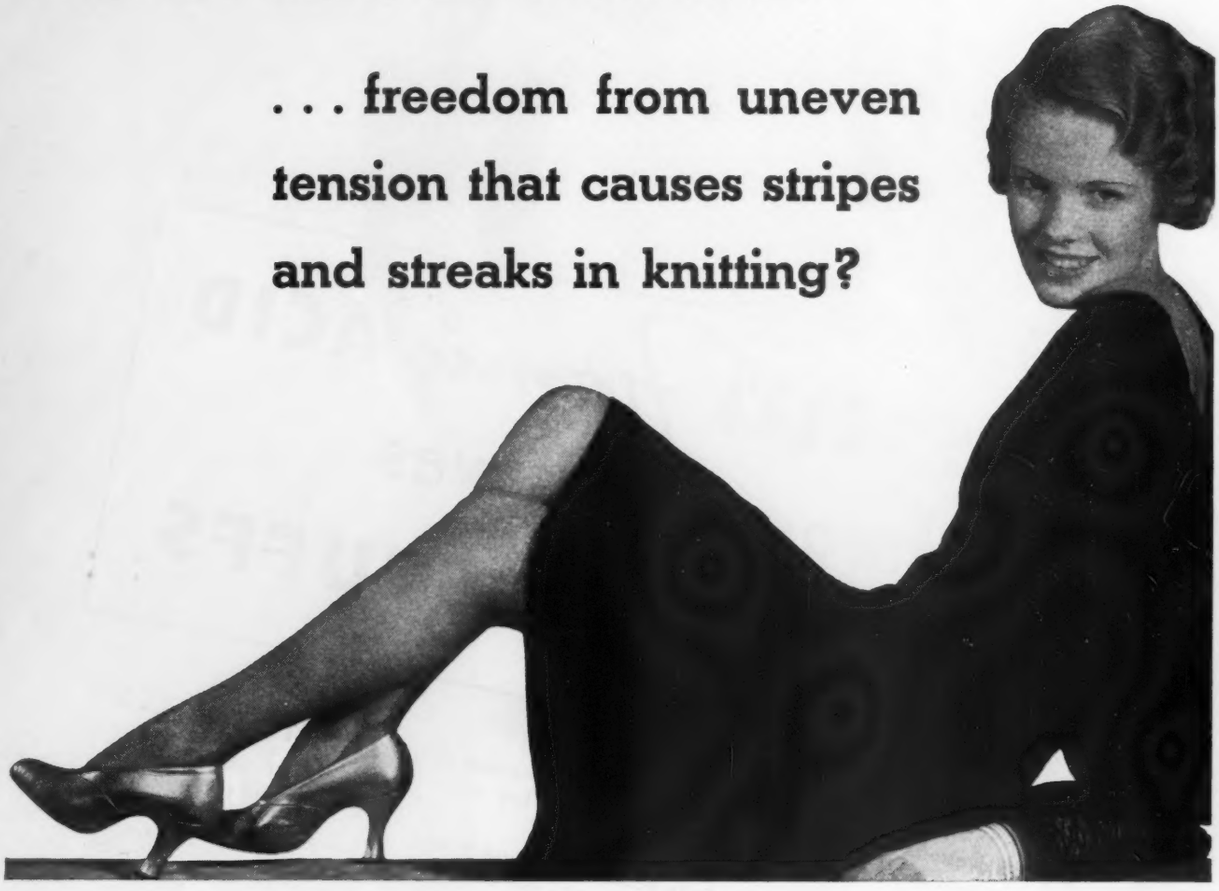
SOCONY-VACUUM OIL CO
INCORPORATED

STANDARD OIL COMPANY OF NEW YORK • VACUUM OIL COMPANY • WADHAMS OIL COMPANY
WHITE STAR REFINING COMPANY • LUBRITE REFINING CORPORATION • WHITE EAGLE OIL CORPORATION
MAGNOLIA PETROLEUM COMPANY • GENERAL PETROLEUM CORPORATION OF CALIFORNIA

GARGOYLE
Lubricants

ISN'T THIS WHAT YOU'RE AFTER?

. . . freedom from uneven tension that causes stripes and streaks in knitting?



ARE you using old-fashioned formulas in soaking silk for three-carrier work? Let us tell you about our proved development—a direct knitting formula for running the yarn from cone to hose.

The yarn made from our formula hugs the cone to exactly the right degree of tension and will run free enough to give a greater number of first-grade finished hose.

Try our SOLUBLE SILK OIL W-814 for soaking silk and SOLUBLE OIL W-530 for throwing rayon.

For boiling-off silk hosiery — our BOIL-OFF OIL No. 1 CONC. and BOIL-OFF OIL S-389 (non-silicate).

For scouring rayon—WOLFCO SOLVENT—gives good clean base for dyeing.

MONOPOLE OIL added to the dyebath acts as a dye penetrant, leveller, and as a finishing agent.

ELEMITE is effectively used where only hard water is available.

HOSIERY FINISH No. 300 and W-686 give body, stiffness and make hose lie flat in box.

DULL FINISH W-716 (paste) and S-342B (powder) are delustres that do not stiffen or dust off.

JACQUES WOLF & CO.

MANUFACTURING CHEMISTS AND IMPORTERS . . . PASSAIC, NEW JERSEY

Warehouses: **Providence, R. I., Philadelphia, Pa., Utica, N.Y., Chicago, Ill., Greenville, S. C., Chattanooga, Tenn.**

GRASSELLI *Formic* ACID
frequently saves
WASTE OF DYESTUFFS

● Good dyestuffs are too expensive to waste. Yet every ounce in the dye-bath that's not utilized simply means dollars lost down the drain-pipe.

Grasselli Formic Acid is often a definite economy because it exhausts the dye-bath completely. But that's not all; this effective exhaust agent not only effects measurable savings in dyestuffs but also produces bright, unclouded colors, level even in cross-dyeing. A trial will convince you.

Grasselli Formic Acid, 85% and 90%, is available in 120 lb. carboys from any of our branches listed below.

THE GRASSELLI CHEMICAL COMPANY, INC.
Founded 1839 *Subsidiary of E. I. Du Pont de Nemours & Co., Inc.* Cleveland, Ohio
New York and Export Office: 350 Fifth Avenue

Albany Birmingham Boston Charlotte Chicago Cincinnati Detroit Milwaukee New Haven New Orleans Philadelphia Pittsburgh St. Louis St. Paul
San Francisco, 584 Mission Street Los Angeles, 2260 East 15th Street
Represented in Canada by CANADIAN INDUSTRIES, LTD.
Acids and General Chemicals Division—Montreal and Toronto

TEXTILE MILLS—
Let us also quote you on

Acetic Acid
Acetate of Soda
Acetate of Lead
Alums, U. S. P.
Aqua Ammonia
Barium Chloride
Bi-Chromate of Soda
Bi-Sulphate of Soda
Bi-Sulphite of Soda
Carbonate of Soda
Caustic Soda Solid and Flake
Chloride of Lime
Chloride of Zinc
Epsom Salts
Glauber's Salt
Lactic Acid
Muriatic Acid
Nitric Acid
Oxalic Acid
Phosphate of Soda
Silicate of Soda
Sulphate of Alumina
Sulphate of Soda, Anhydrous
Sulphite of Soda
Sulphide of Soda
Sulphuric Acid
Tri-Sodium Phosphate

FOUNDED 1839 GRASSELLI REG. U.S. PAT. OFF.

gives a very complete exhaust of the dye bath

TREADS

Stop Belt Slip.... As they do Foot-Slip

Why do they put treads on sport shoes? For better grip, of course, to make the wearer sure-footed.

Just as the ribs on shoe soles, or treads on stairs, safeguard the pedestrian, so does VIM TRED Leather Belting, with its non-skid surface, safeguard your plant against power waste because of its better grip on the pulley. It, too, is "sure-footed," hugging the pulley at all speeds, and gripping from 25% to 40% better by actual test.

Its extreme flexibility means that it may be used on unusually small pulleys or short centers. Try VIM TRED in your own plant and be convinced. You'll cut power costs very appreciably, and increase production by standardizing on—

VIM TRED LEATHER BELTING

Write to 240 W. Somerset St., Philadelphia, for free booklet and full story.

E. F. HOUGHTON & CO.

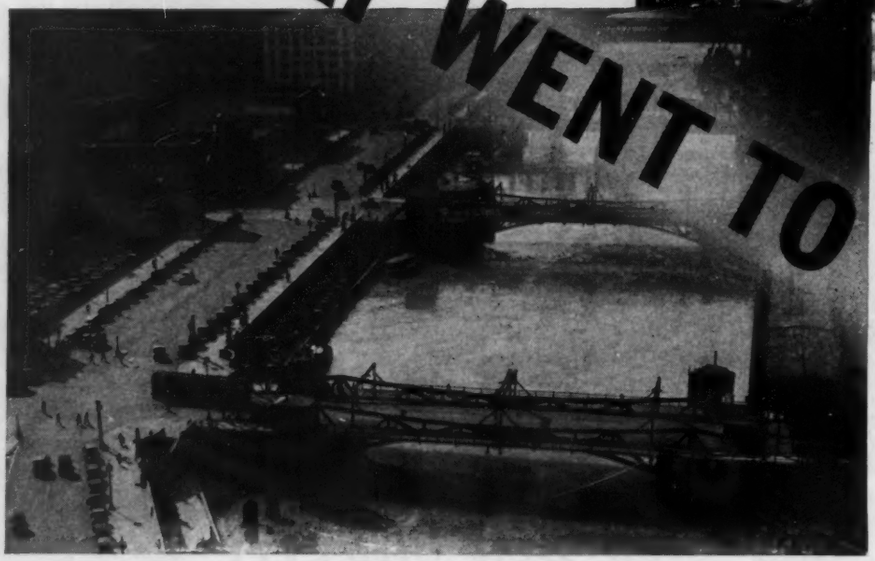
Chicago PHILADELPHIA Detroit

VIM TRED REG. U.S. PAT. OFF. HOUGH TONE

LEATHER BELTING

1865 EFH 1935 70 YEARS OF SERVICE TO THE INDUSTRIES

THE RIVER THAT WENT TO TOWN



● You've seen streams change from rustic nobodies to big-city waterways. But has the quality of the water improved with this going-to-town process?

No. Modern river water is full of dirt and oil, hardness and color. It isn't fit for use in a modern textile plant. Textile supply water must be absolutely clear, soft and colorless for the wet processing that modern fabrics require.

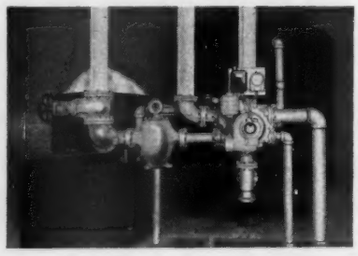
Research engineers will tell you that practically *all* mill water supplies must be properly conditioned to enable finished goods of high quality to be produced.

That's why more than 1,000 modern textile plants use Permutit Water Conditioning Equipment. The advantages of such equipment are immediately evident. There are fewer reruns and rejections. Soap, soda and bleach are saved. Boiler tube repairs and replacements are reduced to a minimum. There is less yarn breakage.

And your finished goods are really soft and smooth. They have a more even, full-bodied color.

Permutit Water Conditioning Equipment *saves* enough to pay for itself in two years . . . sometimes in a single year!

Write for our free booklet, "Reducing Textile Costs and Troubles." It is a valuable handbook of information on water treatment. If you would like to know how water conditioning can improve *your* water supplies, we will gladly make a free survey of your mill. Write The Permutit Company, 330 West 42nd Street, New York.



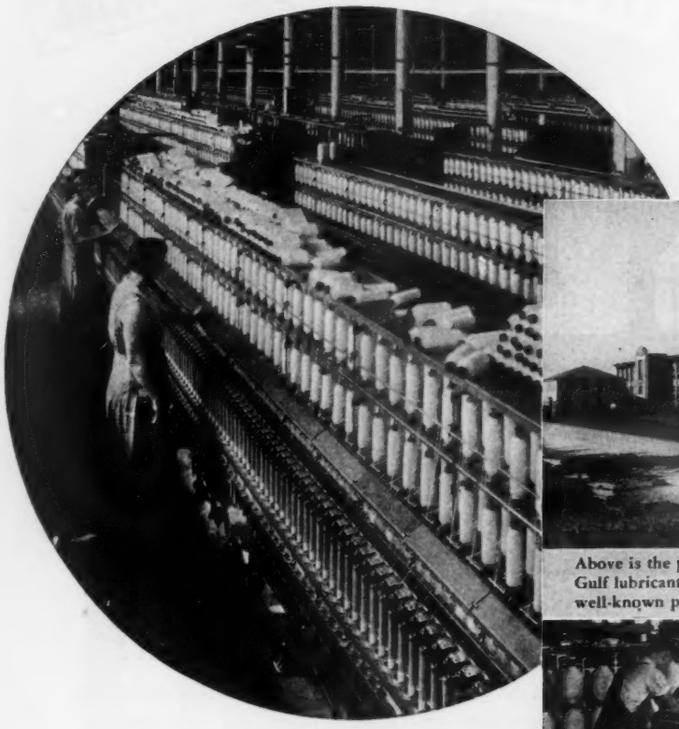
Why not modernize your old equipment? Install Permutit's new single-valve automatic control. Refill your softener with Super-Zeo-Dur, the recently perfected greensand zeolite that uses less salt and has a higher capacity for softening water than ever before. Write for details.

Permutit

Water Conditioning Equipment

"GULF GIVES US THE *Best* LUBRICATION PER DOLLAR"

Says: **INGRAM MFG. CO., NASHVILLE, TENN.**



Left—20,000 spindles are kept in efficient operation in this spindle room with the right grades of Gulf quality lubricants in service.

Above is the plant of the Ingram Manufacturing Co. of Nashville, Tenn., where Gulf lubricants are keeping all machinery in efficient, low-cost operation. This well-known plant specializes in the manufacture of Merino yarn.

Above is a view of the card room in the Ingram Manufacturing Co. plant, showing the cotton in a preparatory stage in the manufacture of the yarn.

Ultimate Economies in Maintenance Invariably Accompany the Use of GULF LUBRICANTS

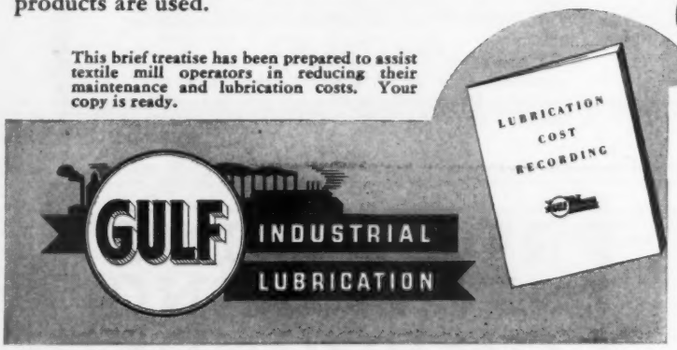
When a textile mill operator says Gulf gives him the *best* lubrication per dollar, that statement implies just one thing. It means that he gets the *lowest ultimate costs for maintenance, power and lubricants* when Gulf products are used.

A trained Gulf engineer will be glad to asssist you in improving the lubrication and operation of your equipment. Why not set a definite time to discuss this matter in detail with a Gulf representative?

GULF REFINING CO., PITTSBURGH, PA.

District Sales Offices:
Boston New York Philadelphia Atlanta New Orleans
Houston Pittsburgh Louisville Toledo

This brief treatise has been prepared to assist textile mill operators in reducing their maintenance and lubrication costs. Your copy is ready.



GULF REFINING COMPANY, C. 5
3800 Gulf Building, Pittsburgh, Pa.

Please send me without obligation, the booklet "Lubrication Cost Recording."

Name.....

Company.....

Address..... Title.....

INVISIBLE *in the Oil*

but

INVALUABLE *in your Mill*

SO_3 CONTENT

THE *Vital Factor* IN SULPHONATED OIL COMPOUNDS

Side by side, in buckets, an ONYX textile compound and an ordinary compound ***often look similar*** . . . but only the ONYX compound has high SO_3 content. You can not see the SO_3 content—but you CAN see its results in your mill performance and in your fabrics!

What SO_3 content does!

SO_3 content gives sulphonated oil compounds resistance to heat, acids, alkalies, hard or calcerous waters. SO_3 controls the stability—the penetration—the solubility. It is the VITAL FACTOR!

SO_3 content is not something ***added*** to sulphonated compounds . . . it is a chemical action that takes place during manufacture. ONYX laboratories and manufacturing methods produce this SO_3 in much higher quantities than average oils.

Mill value of SO_3 content!

High SO_3 content assures complete solution—prevents breaking—prevents oil spots—gives improved processing and finishing results. In ONYX compounds this SO_3 content is not only ***higher,*** but is assured in ***uniform*** quantities in each shipment. Thus, you have more accurate control over formulae and more uniform production.

Use ONYX compounds for bleaching, sizing, dyeing, printing and finishing. Get the advantages of an SO_3 content two to three times that of ordinary oils. Write for samples, stating operation and fabric.

ONYX OIL & CHEMICAL CO.

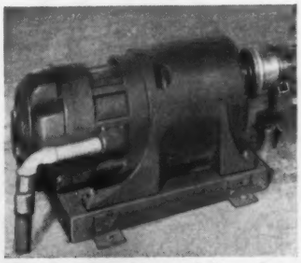
Specialists on Finishing Materials.

Jersey City, N. J.

Southern Repr. E. W. Klumph, Charlotte, N. C.
Midw. Repr. Maher Color & Chemical Co., Inc., Chicago.
In Canada: Onyx Oil & Chemical Co., Ltd., Montreal.

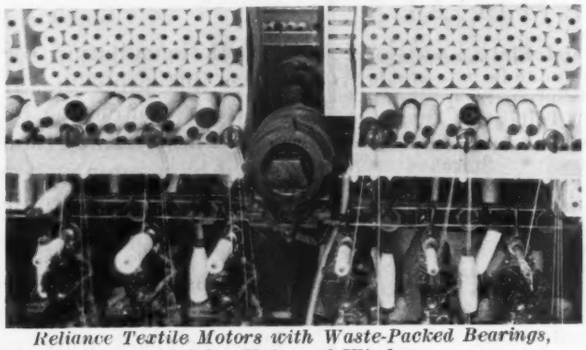
Onyx LABORATORY-CONTROLLED **PROCESSING & FINISHING COMPOUNDS**

We KNOW *the kind of motors needed in the* TEXTILE INDUSTRY



Warp Compressor driven by Reliance Gear Motor

Reliance 4-Frame Drives for Twisters



Reliance Textile Motors with Waste-Packed Bearings, driving Universal Winders

GOOD engineering is a combination of theory and practical experience. Reliance engineers combine their theoretical knowledge with the mill man's practical experience of the application. The outcome is a balanced motor design to meet the needs of the textile industry.

The all-steel frame construction, self-cleaning stators with large air passages, and smooth one-piece rotors mean that Reliance Motors are free from lint and consequently well adapted for cotton mill service. Drawing frames, spinning frames, spoolers, looms, twisters, and winders are among the many applications on which, day after day, Reliance Motors keep production up and maintenance down.

Reliance engineers are ready to give you the benefit of their knowledge and experience and to help you solve your application problem, no matter how difficult.

Reliance loom motors, having steel frames, heat-treated alloy steel shafts, and liberal waste-packed bearings, give low maintenance. High efficiencies lead to low power costs.

RELIANCE A-C D-C MOTORS

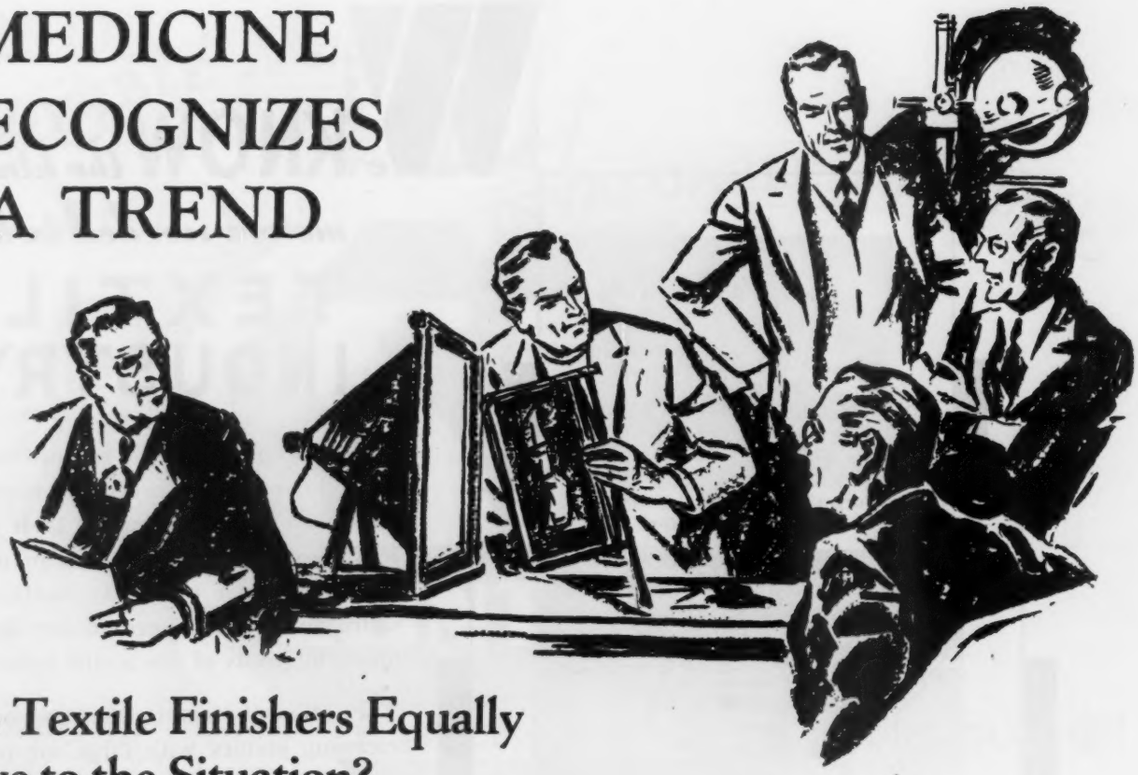
RELIANCE ELECTRIC & ENGINEERING COMPANY

1088 Ivanhoe Road **Cleveland, Ohio**

Branches: Birmingham — Boston — Buffalo — Chicago — Cincinnati — Detroit — New York — Philadelphia — Pittsburgh — Washington

Representatives in other principal cities.

MEDICINE RECOGNIZES A TREND



Are Textile Finishers Equally Alive to the Situation?

Laboratories and research are constantly increasing the scientific facts that must be assimilated by conscientious doctors. One man is no longer equal to the task. Consequently more and more physicians are organizing into working units known as "doctor groups", composed of a surgeon, a medical man, an obstetrician, a pediatrician and so on.

This need for collective thinking is not confined to medical science alone. It is equally pronounced in textile chemistry. But is the textile finishing industry as a whole equally alive to the situation?

CHEMICALS

Sizing and Finishing Gums and Compounds • Soluble Gums • Softeners • Soluble Oils • Tallow • Waxes • Soaps • Flour • Dextrines • Starches • Pigment Colors and Lakes • Ammonia • Acids • Blue Vitriol • Borax • Bichromate of Soda • Bichromate of Potash • Liquid Chlorine • Chloride of Lime • Caustic Soda (solid and flaked)

Granting that the need is recognized, the problem still remains of how to meet it; for the average textile finishing plant or department can not afford to retain a group of finishing specialists.

A-H Consultation Service can solve this problem. It is rendered, free of charge, by a group of specially trained chemists, assisted by a completely equipped laboratory and a company experience of 120 years.

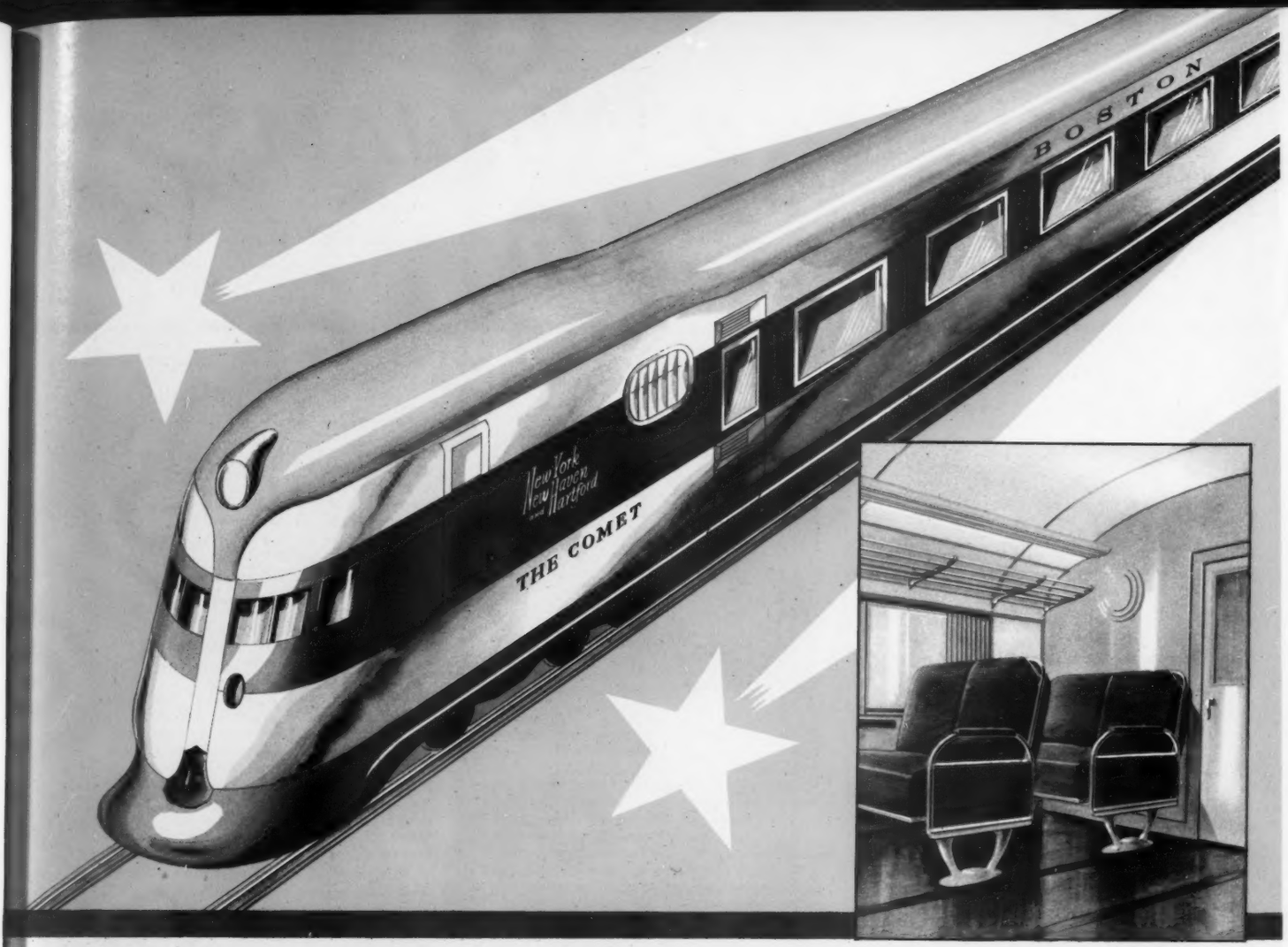
Let us help you solve new sizing, finishing or printing problems, or check with you on the efficiency of routine methods.

Arnold, Hoffman & Co., Inc.

Established 1815. Plant at Dighton, Mass.

PROVIDENCE, R. I.

New York • Boston • Philadelphia • Charlotte



THE NEW HAVEN "COMET"

Goes to Color . . . and Comes to Sherwin-Williams!

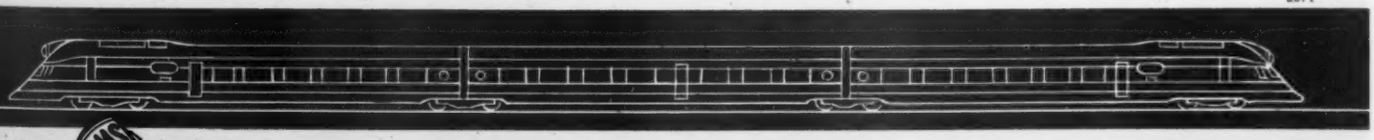
COMET! . . . streamline! . . . speed! . . . and it looks its speed and perfection! Inside and out, Sherwin-Williams colors . . . Sherwin-Williams finishes.

These finishes were chosen because of their attractive appearance and because of their proven ability to withstand all the rigors of railroading.

They were also chosen because of the wide experience and helpful suggestions of the Sherwin-Williams Decorative Studios. From first color sketch to finished coloring, from small interior compartments to the entire exterior, Sherwin-Williams service guided, aided and abetted every move.

This same S-W service—these same S-W paints and finishes—are yours. We believe we can also help your product, large or small, toy or train, to appeal to today's market by appearing as it should, in today's competition. Write to The Sherwin-Williams Co., Cleveland, Ohio, and all principal cities.

2071



SHERWIN-WILLIAMS PAINTS

COVER THE EARTH

SHERWIN-WILLIAMS PAINTS

NEW HAVEN

When the New York, New Haven and Hartford Railroad decided to build its first streamlined train, it also decided to use every modern means available to make it *streamline* in appearance as well as performance. All the trains previously built had assumed the outward shape streamline principles dictated, but none had utilized the value of color to dramatically present the body lines to those seeing the latest in railroad equipment.

So New Haven and Goodyear (builders of the train) design engineers, and Sherwin-Williams paint engineers went to work, with the results shown on the previous page. The color scheme utilizes the natural tones of the metal body, by simply protecting it with a clear lacquer. The engine-turned surface is strikingly beautiful. The blue band which encircles the entire train at the window level, and the narrow dark blue skirt give the beholder the feeling of speed and power, emphasized by the name of the train, The Comet! The horizontal blue stripe also makes the train look longer, lower, safer. A lighter gray than the color of the metal body is used to finish the roof.

The interior goes further into color values. The seats are finished in brown velour, the walls are in tones of yellow and cream, the colors becoming lighter toward the roof. A feeling of spaciousness is thus achieved.

Engineers who have seen the train are unanimous in their praise of the use of color. Not only as a pioneering effort, but as a well done, beautiful job, the New Haven designers and Sherwin-Williams paint engineering service have a well-earned right to be proud.

WILLIAMS BAKERY

In Scranton and Wilkes-Barre, Pennsylvania, and in Binghamton and Newburgh, New York, are the major plants of the Williams Bakery Company. The pictures shown were taken in the Wilkes-Barre bakery, and they illustrate the perfect maintenance not only of this plant but of the entire chain.

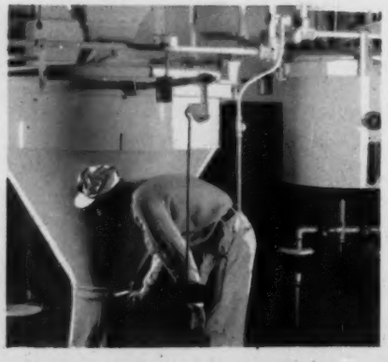
White paint is the major motif of all bakery painting, and the Williams Bakeries are no exception. Even the engine room is as white as the baking departments themselves.

Bakeries are members of the constantly

increasing number of industries using that strongest of advertising's forces: getting visitors into the plant. A convinced visitor is not only a sold customer but an advertising asset as well. Word of mouth is still the strongest sales agent.

Visiting is encouraged in the bakeries, and Sherwin-Williams Save-Lite is used throughout, not only to give the plant the spick-and-span appearance it needs but also to aid every bit of light used. Baking is done at night, and so all the work takes place under artificial illumination. Save-Lite aids lighting by reflecting every bit of light that strikes it, and that means lower light bills, as well as better working and safety conditions.

The machinery is also finished in a beautiful white S-W Kem Enamel. Notice the S-W standardization chart on the wall above the engineer's desk. S-W paints are used throughout. This includes a standardized pipe line color scheme—the brightly marked pipes furnishing a nice decorative balance to the rest of the plant.



CEILINGS

One of the assets many plants overlook is their ceilings. They're a lot more than a covering to keep the rain out and keep heat in. They are in many plants, and can be in most, a means of sky-lighting your entire interior and making working conditions infinitely better.

By this we don't mean that they need to be reconstructed and filled with overhead windows. All that need be done is to paint them properly with S-W Save-Lite. "Sky-lite your ceiling with Save-Lite" to aid your production and cut your unit costs.

Light is lazy—it needs high reflective surfaces to make it work its best. Its reflection also needs to be properly directed. And in industrial plants, that means *evenly diffused* all over the interior, so there are no highs and lows of light—glaring spots or dark spots where accidents may easily happen, and where work is subject to rejection because operators have hard conditions to face.

Your ceiling, if it is painted with S-W Save-Lite, acts as a true reflector for artificial and natural illumination—acts as a skylight flooding your interior with light, the most important thing in the world to the eyes of every one of your employees. "Sky-lite your ceiling with Save-Lite." You'll find it pays, and pays, and pays.

SAVE-LITE

SAVE-LITE (specially formulated for your industry) is the *PLANT CONDITIONING* paint. There is no all-purpose mill white. Sherwin-Williams paint engineers, constantly faced with painting problems in various industries . . . automotive—textile—food—chemical—mining—metallurgical—radio—tobacco—transportation—aviation—metals fabrication—steel—non-ferrous metals—gas and oil—cosmetic—ceramic—woodworking—toys—giftware and novelties (to name a few) . . . have formulated hundreds of paints for hundreds of specific uses. Save-Lite is a basic paint formula for the best industrial mill white. Just as it comes in Eg-Shel, Gloss or Flat, so it comes to your industry as a special paint to meet your specific needs. Call on Sherwin-Williams Paint Engineers to assist you in Painting Your Way to Profits. Use their experience to solve your paint problems.

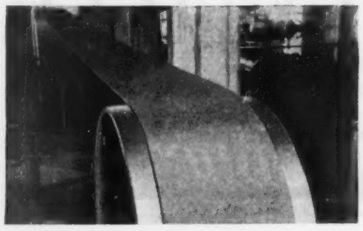
SEE THE SHERWIN-WILLIAMS PAINT ENGINEER

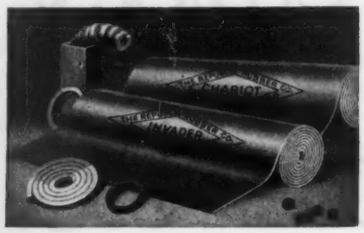
SERVICE

at These Points

Republic

BELTING, HOSE AND PACKING





• One reason for Republic's leadership is its long association with the nation's outstanding mill supply distributors. Their prompt, helpful and efficient service has proven a practical economy for all users of mechanical rubber products.

You gain valuable advantages through Republic's highly organized plan of distribution. The aid of factory experts on technical problems is combined with large, local warehouse stocks; active, local interest in your business; sound, local responsibility and all the benefits of frequent contacts, intimate knowledge of your needs and immediate delivery. Such service meets your usual or emergency requirements equally well, cuts deeply into your overhead costs and provides a strong safeguard to keep your production at highest efficiency.

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For
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NEW DESIGNS · REPRODUCTIONS

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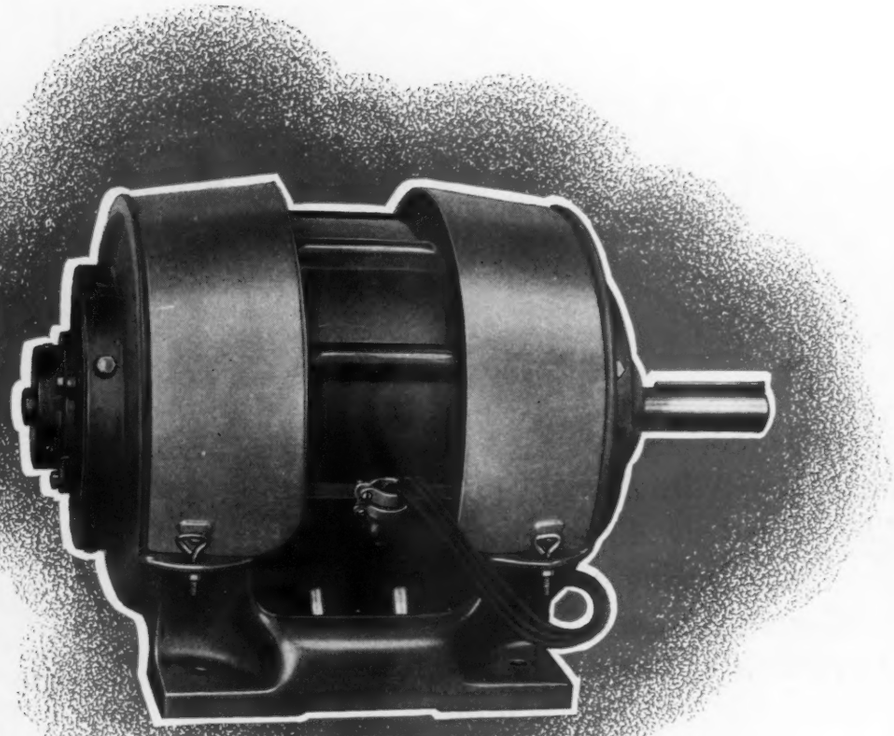
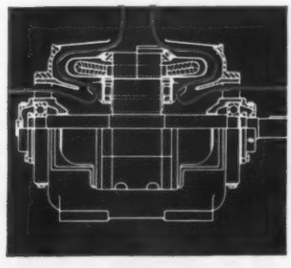
DOWN GO maintenance costs... with this NEW motor



Lint and dust are a problem — or were. Not any more. ◆ There's no way to prevent their getting into a motor. The sensible, logical thing is to make it easy for lint and dust *to get out again* — big, unrestricted air passages, and glass-smooth surfaces inside, to which lint will not adhere, accomplish this — thus overheating is eliminated. ◆ This new "Quick-Clean" motor definitely gives you these advantages; specially developed by Allis-Chalmers *for cotton mill service.* ◆ Four sizes — 5, 7½, 10 and 15 hp. Standard N. E. M. A. mounting dimensions. ◆ Write for new bulletin No. 1172.

Cut-away section of motor showing internal construction. Note large, smooth, unrestricted air passages for thorough ventilation.



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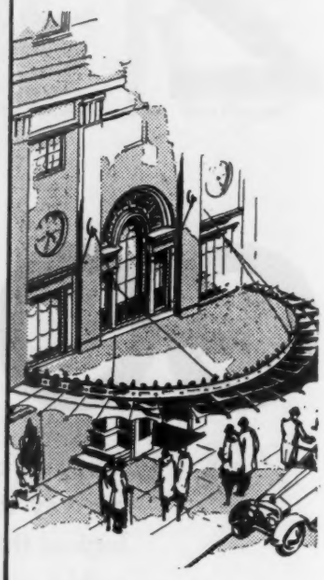

The Della Robbia Room

The Cleveland Tractor Company says—

"WE FIND DAYTON V-BELT DRIVES MUCH MORE EFFICIENT."

● Today Dayton V-Belt Drives are used on all types of machines in the highly efficient plant of the Cleveland Tractor Company. In speaking about these drives, Andrew Fussner, the Master Mechanic, says: "In addition to greater efficiency, these drives have effected real power savings. Previously power was supplied to run all machines in a department or building when, frequently, only a few machines were being used. Further, we find that maintenance costs are much lower—the plant is cleaner and safer and much valuable floor space has been saved by using these individual drives. Thus, our total savings in a year are very much worth while."

Engineers and Production Managers in thousands of plants of all kinds have secured similar results by installing Dayton V-Belt Drives. Here are some of the reasons why. Dayton V-Belts are "built-to-bend." Their exclusive and patented construction makes them more flexible. They are die-cut, not molded. They accurately fit the grooves of all standard pulleys. Their rigid crosswise construction prevents distortion—there is no slipping or weaving. This means smoother running . . . positive speed . . . less tension . . . less wear on bearings. Machines last longer and there's practically no maintenance cost.

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● *No other V-Belt combines such positive crosswise rigidity with such extreme flexibility.*

And there's much more to tell. Let us give you all the facts about the many exclusive advantages of Dayton V-Belt Drives. Wire or write today.

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The World's Largest Manufacturers of V-Belts

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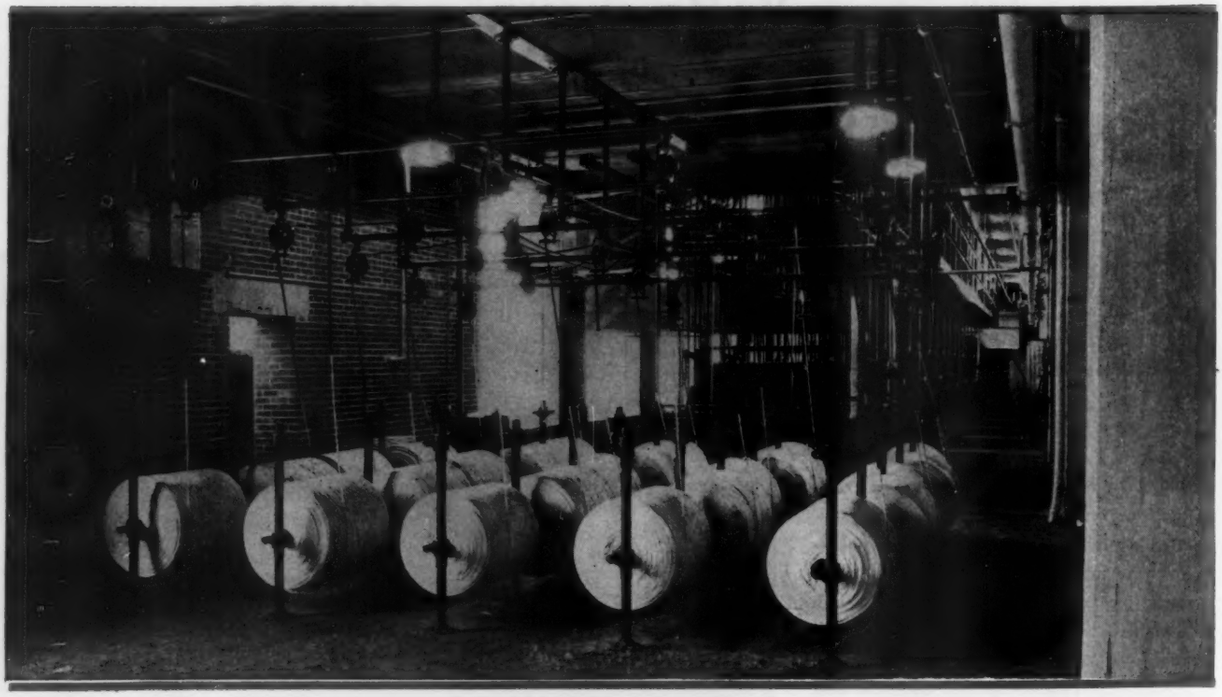
COG-BELT DRIVES

Cog-Belt Drives—F.H.P. V-Belt Drives—V-Flat Drives—Complete Drives, Pulleys and Belts in Stock. Fractional to 100 H.P.

IN THIS CONTINUOUS INDIGO DYEING MACHINE



There's no danger of the swifts in this indigo dyeing machine reacting with the dyestuffs. They're made of lustrous ENDURO, *Republic's perfected stainless steel. Fabricated by Cocker Machine and Foundry Co., Gastonia, N. C.*

...they banished rust liability with swifts of Stainless

ENDURO

Here in the Lindale, Ga., division of the Pepperell Manufacturing Company, they have banished another troublesome problem on this huge continuous dyeing machine. The 340 oxidizing swifts now are made of ENDURO, Republic's perfected stainless steel. No longer are these swifts subject to attack or discoloration from the dye, or from the dyehouse atmosphere during shutdowns. For ENDURO'S unique properties enable it to resist... indefinitely so . . . these factors which seriously affect colors and add heavily to cleaning costs. And ENDURO'S smooth, hard surface, and its high strength, provide worthwhile advantages, too. Yarns and fabrics are completely protected against tearage; and lighter gauge sections can be used for all self-supporting equipment. The complete story relative to ENDURO will be of interest to every cotton mill executive. Ask Republic to send you all the facts today.

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REPUBLIC'S PERFECTED
STAINLESS STEEL
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Republic Steel CORPORATION

CENTRAL ALLOY DIVISION, MASSILLON, OHIO
GENERAL OFFICES: YOUNGSTOWN, OHIO

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COTTON

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CLEVELAND, OHIO

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Vol. 99
No. 5

COTTON

May,
1935

A LEADER OF MEN

A Word Picture and Brief Biography of the New President of the American Cotton Manufacturers Association . .

TRUE leadership of men is an intrinsic quality which, while acquired by many, springs most naturally from inherent powers in a few men in an industry within a generation. It embraces, among other important ingredients, an ability to merit and inspire confidence and to execute and grow.

This is the story of a man, who possesses, perhaps as his outstanding characteristic, a quality of leadership based on his ability to draw out men's interests and efforts. For Thomas H. Webb—and it is with the newly elected president of the American Cotton Manufacturers' Association that this story deals—is indeed a leader. He is a man who through an innate love for people and a consequent capacity for true friendship, coupled with an efficient ability to accomplish the tasks unfolding before him, has progressed unspectacularly, but always surely and always upward, from an humble beginning to a preeminent position in his industry.

The purpose of this sketch is to record briefly the life and career of the man and to delineate the character and qualities largely responsible for his elevation to this, the highest honor within the power of his fellow southern cotton manufacturers as a body to bestow.

Tom Webb was born in Hillsboro, in Orange County, North Carolina, on March 5, 1871, the son of Thomas and Robina Norwood Webb. His antecedents go back to James Hogg, a great-great-grandfather who emigrated to the new hopes and opportunities of America in 1774, from Lothian, Scotland, and who, with his progeny, contributed richly in talent and effort to the pioneer development of the old North State. The elder Thomas Webb was an outstanding lawyer of his day, and young Tom, with five brothers and two sisters, was born into a family rich in heritage of constructive accomplishment and service—the true pioneer aristocracy of Middle North Carolina.

Reverses of reconstruction days, and his father's untimely death, forced young Tom, after preliminary schooling, to meet the responsibilities of life at an early age. At 15 years of age he started to work, in the old Glencoe Mill at Burlington, N. C., his first task being that of cleaning the oil lamps and sweeping the floor—so that he literally started at the bottom. He took this first job on June 1, 1886. A short while later he went to the Wennonah Cotton Mills at Lexington, N. C., and, having become a weaver there, transferred to the Alamance Mill at Burlington as manager. He had, by study and hard work, improved his proficiency to such an extent that in 1896, at 25 years of age, he became the first superintendent and general manager of and assisted in the erection of the Eno Cotton Mills, which were built at Hillsboro, his native town, in that year.

It was while he was operating the Eno mill that Tom came into contact with the late W. A. Erwin. Just how it came about is not in the record. Out of Tom's Scotch Presbyterian ancestry and training, perhaps it might be considered a predestined event. Anyhow, Mr. Erwin most assuredly could pick his men. In 1901, Tom became superintendent of Erwin Mill No. 1 at Durham. When, in 1904, a manager was needed for Erwin Mill No. 2, at Duke (now Erwin), N. C., young Webb was sent there, and retained this position until December 1916, when he was made secretary and treasurer of the Locke Cotton Mills Company at Concord, N. C., of which Mr. Erwin had become president in 1916. Then, in 1932, upon Mr. Erwin's death, Webb was made president at Locke, the position he now holds.

That factual statement of his progress reveals a record—one perhaps too infrequent in this industry—of steady growth from an humble beginning as operative, through the intermediate stages in the mill, to superintendent, then manager, and on to president. It is a record which, culminating now in the presidency of the American Association, is a tribute to a personality and a capacity for leadership.

For Tom Webb *is* a leader; not the dynamic, forceful, bombastic type that is conspicuous and singled out either for individual attention or for the promi-

nence of his organization, but rather a quiet man who bestows a full measure of confidence upon his co-workers and receives confidence and loyalty from them in return. His own complete humanity elicits a response of co-operation from his associates, and an example of honesty and unstinted work inspires in those who work with him a genuine desire to do their part.

No False Formality

There is no standing-on-ceremony nor useless trappings of assumed dignity around Webb's office. He's approachable by anyone who has something to see him about, and the visitor invariably gets a sympathetic, friendly audience. As an executive, Webb works easily, with no especial outward display of effort. His background of practical experience is kept fresh by a continuing interest in the practical side of manufacturing, and stands him well in relation to his work of a administrative and merchandising nature, to which he now devotes most of his business effort. Aside from occasional trips to New York and other markets, he is usually found at the Locke mill office where he carries on his duties.

Aside from the business of the mill, Webb's activities and interests center almost wholly in his church, his family and his friends. In 1895 he was married to Miss Isabel Graham, who died in 1902, and two children—the late Thomas Webb, Jr., and John Graham Webb—blessed their union. In 1907, he was married to Miss Louise Robeson, and they have two daughters, Mrs. Joseph M. Barrier and Mrs. Clarence A. Ridenhour, both of Concord. In 1896, he became a member of the Protestant Episcopal Church. He has for many years been vice-president of the Concord National Bank. He was for eight years chairman of the Cabarrus County Highway Commission, and the good roads system of the county stands as a monument to the efficient business methods installed and scrupulously enforced by the Commission. He is a member of the Concord Rotary Club, and served as its first president. He is a Mason, and a member of the Knights of Pythias, and has served the latter as Grand Chancellor of North Carolina and Supreme Representative from North Carolina.

A Picture of the Man

Thus his activities; now, the man. Tom Webb is a true, intense friend and a good neighbor. Representing that solid, substantial, reliable type of friendly citizenship and neighborliness that comes from his North Carolina upbringing and heritage, his outstanding traits are his personality and his intense love of people. No one ever realized more fully than he, the fullness of comradeship. Affable, courteous, completely human, and with a democracy that springs from true aristocracy of spirit, he is the ideal companion. Always cheerful, with an easy, approachable manner, he instinctively attracts friendships and gives in return a confidence and warmth of affection which know no bounds of prejudice or selfishness. His intimate associates are friends of long tenure, and his intense devotion to a friend under all circumstances is a demonstration of the genuine unselfishness that is inherent in him and an evidence of his complete love of man.

Webb is not a college man in the technical sense of the word, and yet in practice he is a graduate, yes, an honor graduate of the School of Hard Knocks. This latest honor from the American Association comes as a tribute of respect to manhood grown grey and golden in his upward climb. His deep understanding of men and their problems, his sympathetic yet firm atttitude toward the lives of those with whom he is associated, his unadulterated dependability and loyalty, make him a most influential leader of men. His own organization speaks for these statements: Frictionless and fraternal, respectful and respected, honorable and honored, are the words which his own men use in describing him.

In his home and in his community, these echoes come with the building up of an abundant personality. Webb's home has always been the Mecca of the young life of the community. His tolerant and understanding attitude have won for him this coveted place—they want him to come in and talk to them, they want him to advise with them about their perplexing problems, they want him as a part of their social enjoyment. Hence he is a Nestor for the young people of his town. Only recently, when a young couple were being entertained before their marriage, at a stag supper given in honor of the young men of the party, Tom Webb "was compelled" to act as toastmaster, rather than some young social celebrity. This fact attests the youthful elasticity of his sympathetic heart and mind, his adaptability, his sense of animation.

His church work has led him into the loyal teachings of the prayer book and litany of the Episcopal church. As vestryman at All Saints' he functions and follows strictly and sternly in the Episcopal way. In attendance at church and the church ordinances, he is excelled by no one; in church and charity support he has an obsession as to what is expected of him. He has the distinction of having attended every annual dioscesan conference of his church for the past 29 years. He attends meticulously to the duties and mandates of his church, carrying into church the same devotion and Christian personality that he carries on week days. He is naturally the kind of man who requires no pose nor change of cloak to adapt himself gracefully from the work-a-day world into the atmosphere of worship; he wears the same character throughout.

A personal distinction that may seem a questionable one to some is that Webb doesn't play golf; he never did, after a desultory attempt some years ago. He doesn't hunt, to speak of—but if he has a hobby in the realm of sport, it is fishing. A trip to Morehead City or Ocracoke is an annual event in his life, in company with a group of intimate friends. More frequently, word that the bream are running in Everetts' Pond, near Rockingham, is the signal to some of his well-trained co-workers to "take over" temporarily, so that he may be off for a few hours or a week-end to relax in his favorite sport and enjoy the fellowship of his companions, any of whom is

always ready for an opportunity of delightful, refreshing association with him.

Webb comes into this new position, as spokesman for the southern textile industry, well prepared for its responsibilities. He is one of the few surviving charter members of the Southern Yarn Spinners Association, which, organized in 1897, became in 1903 the American Cotton Manufacturers' Association. He has been perhaps the most regular attendant at its meetings since they were started. In 1928 he served notably as president of the Cotton Manufacturers' Association of North Carolina.

So, the American Association comes to dignify its idealism in selecting Tom Webb as president for the ensuing year, to recognize the abundant life as of sufficient merit for reward. Without especial distinction in a material sense, he is a sane, conservative, hard-working man who puts more into life than he takes out, but who by virtue of that philosophy reaps in life's realities, more than he sows. This study must not be construed as implying that Tom Webb has traveled solely on personality. Though unspectacular, his career has been a successful one. But added to a record of quiet, constructive ability and its results, is a predominant evidence of a fullness of life and living which, imposed upon and intertwined with his business life, endows him with a real greatness of character and influence excelling the material reward of his work, as well as the achievements of many who are known more by the measure of their material acquisitions.

As with all his undertakings, Tom Webb will give this new job a conscientious service. He will inspire co-operation among his fellow-members, and his sound judgment in assigning tasks, and in directing the association's policy, will result in a year accomplishment and progress.

Uses for Cotton Bags

For several years, the Cotton-Textile Institute, active at all times through its New Uses Section in seeking new outlets for cotton goods, has been directing considerable effort toward acquainting housewives with the many uses to which emptied flour and sugar sacks can be put in the home.

While hundreds of women are already re-using these sacks in numerous ways, the first instance of a department store placing these bags on sale has but recently occurred. A large Wisconsin department store, seeing the possibilities of such a sale, purchased 1000 of these sacks from a Minneapolis supply house and sold them out in one day during their store-wide Cotton Sales.

The success of this event would indicate that there are vast unopened promotional possibilities in making the sale of used cotton sacks a regular feature.

Stores located in towns or cities where there are large commercial bakeries, flour mills, sugar refineries, candy and ice cream factories or other concerns who buy or sell sugar and flour in large quantities would find their source of supply near at hand and reasonably priced. Used bags that may be slightly defective for their original uses are procurable at small cost and answer the housewives' needs for many purposes.

Among these purposes are included children's underwear and play clothes, table cloths and mats, towels, dusters, storage bags and many other practical home or summer camp items.

Colored open-mesh onion bagging has also been used by some imaginative housewives for curtain material in summer homes and camps with satisfactory and attractive results.

Lingerie Models

A collection of new lingerie models, original designs by Dilkusha and Kotchoubey of Paris and made from the new American cotton fabrics, were given their initial presentation in America at the Waldorf-Astoria Hotel recently. Manikins displayed the models at a reception and tea for the fashion press and for representative fashion authorities.

The Cotton-Textile Institute of New York City selected the cottons of which the lingerie is made for their special finish and adaptability for lingerie designs and then sent the cottons to the two Paris designers. How inspirational they were to Dilkusha and Kotchoubey is proved by the entrancing and enticing, but at the same time wearable designs in lingerie displayed today.

The cottons are delightful in sheers and semi-sheers, in finishes that are very new—soft and smooth to the touch yet crisp and fresh in appearance. Many of them are actually air-conditioned, a new word in the describing of cottons these days that means they are specially constructed and finished to provide a maximum of coolness and comfort.

A blouse-and-pantie-in-one and a blouse-and-petticoat are two of the striking new ideas. They are ready for a suit or sports skirt to be slipped over them and presto!—the costume is complete.

Petticoats with slits in the bandings of lace at the bottom follow appropriately the fashion trend for full skirts without any suggestion of encumbering undergarments. These designs further the revival of petticoats which caught the attention of fashion authorities at the Paris openings this Spring.

The nightgowns are a story all in themselves, fascinating models that look like evening dresses. There are real beauties in sheer white, but newer are the unusual colors—bittersweet red for one, plaids for another, blue scattered with red and white stars for a third.

In addition there are brief panties and brassiers and all-in-one combinations. A youthful pajama suit has a top like a shirtwaist blouse for distinction.

They have been brought to America by The Cotton-Textile Institute for reproduction. Recognized style authorities say that if the loveliness of the models shown today is taken as a standard of what can be done with American cottons in the designing of lingerie, there will be a wave of popularity for this new American-Parisian blend of fashion.

* * *

D-13 Appointments

Committee D-13 on Textiles of American Society for Testing Materials has announced the appointment of A. C. Clifford as chairman of Subcommittee A-1, Section II on Cotton Yarns and Threads. This section is now a consolidation of the old Section II on Cotton Yarns and Section VIII on Cotton Sewing Threads. Mr. Clifford is with the Western Electric Company. R. H. Brown, of Parks-Cramer Company, is now chairman of Sub-committee B1, Section III on Humidity.

Subscribers Please Note

The publishers of COTTON wish to advise that a Mr. Hamer, who we understand is calling on a number of textile mills in connection with a book he is publishing, has no connection whatever with the subscription department or any other department of COTTON.

Some Views on Recent Textile Trends

Written in order to put some very interesting developments into the record for posterity

By a Boatrocker

THROUGHOUT the month of April there were developments of a major character in the cotton-textile industry, which were of sufficient moment to that industry and other branches of textiles—as well as to business in general, as to merit especial comment. One was the projection of the issue of Japanese and other foreign competition and the processing tax and their effect upon textiles in this country. No detailed account of the unprecedented amount of discussion on these subjects is practicable within reasonable space limitations; anyhow, this industry is sufficiently familiar with the subjects—and for those who need the figures as to the effects of these influences, a careful reading of the admirable presentation by William P. Jacobs, reproduced in large part on page 52 of this issue of COTTON, is recommended.

For nearly two years the industry has been paying the 4.2 cents per pound processing tax, without a great deal of organized or articulated resistance. According to Mr. Jacobs, the amount of the tax collected in four southern states alone, to January 1, 1935, was $89,431,212. (The fact that of this amount, less than $34,000,00 was paid to cotton growers of these states—for whom this super-sales tax was originally conceived—is, as Mr. Jacobs points out, an important and ironical fact, but it is not germane to the present comment.)

Long-delayed active resistance to the pressure of the tax—resulting in loss of foreign markets and a diminished domestic market for American mills—began asserting itself in late March this year, when Senator Walter F. George secured the Senate's adoption of an amendment to the then pending works relief bill making it possible for the President under the unprecedented power granted him in the expenditure of the works relief money, to lift the processing tax and provide the farmer benefits from the general fund. (It is a good second-guess to say of course that this provision should have been made mandatory, but the fact remains it wasn't.)

Some Vitally Interesting Chronology

The chronology of developments since the introduction of the George amendment is interesting for the record. On March 27, a committee from Georgia textile mills went to Washington and conferred with the Georgia delegation in Congress, offering opposition to the processing tax, the Wagner bill, Japanese imports, and other matters. On March 28, Secretary of Agriculture Wallace expressed himself in opposition to the George amendment, naively stating that, instead of being reduced or removed, the processing tax might be increased. That afternoon, Senator George made a stirring speech on the Senate floor, strongly condemning the statements of the Secretary of Agriculture and implying his unfitness for membership in the Cabinet.

On April 1, Donald Comer presented a strong plea in behalf of textile manufacturers, before the Senate Labor Committee in opposition to the vicious Wagner labor bill. That same week, Senator Bankhead defended his own cotton program, and provoked a bitter debate in the Senate on the processing tax and the agricultural program. Concurrently spokesmen within and outside of the textile industry began a barrage of criticism and opposition to Mr. Wallace's stand. This expression of criticism took immediate form in the nature of letters, telegrams and other communications from all parts of the country. On April 6 the New England delegation in Congress announced plans to press for the relief of textile mills by removal of the processing tax, ban on Japanese imports, etc.

Secretary Wallace announced plans to speak in Atlanta, at a meeting commemorating Thomas Jefferson. Governor Eugene Talmadge, of Georgia, who has been heard from before, severely questioned the appropriateness of Mr. Wallace's speaking at a Jefferson Day celebration, citing that it would be contrary to that revered forefather's stated principle about that government being the best which governs least.

Harry P. Kendall, of Kendall Mills, proposed that if the processing tax were removed, a 10 per cent wage increase in the industry might be effected.

On April 10, Senators George, Smith, Byrnes and Bankhead conferred with President Roosevelt and asked for relief from the processing tax by payment of cotton benefits out of the relief fund, and to request a continuation of the government's 12-cent loan on the 1935 cotton crop. (The works relief bill had, on April 5, been passed by Congress, and signed by the President.) Mr. Roosevelt, however, refused to pay the farm benefits out of the relief fund, under the authority given by the George amendment, and declared that the processing tax must continue until other funds were specifically provided for its purpose. He minimized Japanese importations by stating that, while they had increased tremendously under the new deal, the total amounted to less than one per cent of this country's total production. He ignored, or failed to realize, that regardless of its current *extent*, the presence of lower-priced foreign goods sets the market and breaks the price to the detriment of local industry. (The same observation might be made as to the proud statement of the Internal Revenue department that they have collected, what was their figure—something like 98.56 per cent of the processing tax due. It is the mills represented in the other 1.44 per cent that undersell the market and creates demoralization for those who did come through with their payments.) Furthermore, while *total* Japanese importations might not cut such a figure compared to *total* U. S. production, the effect is tremendous in certain groups with which the imports directly compete. For example, 10,000,000 yards of Japanese print cloths might not loom large in comparison to the total U. S. production of *all* textiles, it might even not have much effect on the market for denims, for example, but it would certainly affect the print cloth market, in which it would be direct competition. Anyhow, Mr. Roosevelt said No.

Mr. Wallace announced his intention to make his Atlanta address, despite the strong suggestion from Georgia's governor that he would be unwelcome, and did so, on April 11, in an endeavor to defend the processing tax, declaring the textile mills were using it solely as an alibi.

On the 13th, reports were that Japan was threatening to discontinue the use of American cotton be-

cause of opposition to Japanese imports to the United States and South America. (The reports didn't show where Japan would get immediately enough cotton elsewhere to supplant her supply from this country.) On the 15th President Roosevelt consented to confer with a Congressional delegation from the textile states, who were conscientiously seeking a solution to the industry's problems. On the same day, James Sinclair, of the Charlton Mills of Fall River, declared he was willing to close his mills in protest against the tax. President Dorr of the Institute replied gracefully and effectively to the ungracious implications of Wallace's Atlanta address.

On April 16, Governor Eugene Talmadge of Georgia announced plans for a speaking tour of the South specifically in opposition to the processing tax. (Whatever their previous relations with him, the Washington New Dealers should seriously consider the practical political effects of Gene Talmadge and his red suspenders, stumping the South against what has become a major issue in the Roosevelt program.)

On the 17th, President Roosevelt ordered the Federal Tariff Commission to make an investigation of the import competition in textiles.

A few days later, the President designated a committee of members of his cabinet—Secretaries Roper, Perkins, Hull and Wallace—to look into this matter of imports, to study the fundamental ailments of the industry, and to note particularly the possibilities as regards the correction of the condition of obsolescence as applied to the industry's equipment. As the eventful month expired, and the presses awaited these comments, this committee had begun its hearings with a group from Maine . . . Then of course there was the meeting of the American Association at Augusta, reported elsewhere in these columns, to which Mr. Roosevelt sent Secretary MacIntyre as an ambassador.

Thus the record of a month in which textiles were returned to the public prints conspicuously. Whatever the immediate outcome, a hopeful result is that the interest of the thinking people of the country generally has become aroused—and has been expressed—over the unequitable, impracticable processing tax; and another is the unprecedented establishment of a "textile bloc" in Congress. After all, a large part of the processing tax money might have been a small price to pay for having been the instrument for presenting generally the facts of how this industry, the first to co-operate with the New Deal program, and admittedly the most effective in carrying out its part of the plan, has not only failed to receive any of the many proposed benefits, but in addition has been subjected to an impossible competitive condition.

The mills have, for two years, shown that they can "take it"; if the agitation concerning the processing tax, unfair foreign competition and other things is but the beginning of a more vocal, energetic program of defense, it will be only fair that they "dish it out" as well.

A Hope for Industrial Self-Government

April 1 brought organized curtailment, and an experiment with more nearly industrial self-government in the cotton-textile trade than was ever practicable under the original NRA set-up. The National Industrial Recovery Board authorized the Cotton Textile Industry Committee to grant curtailment privilege to particular divisions or groups in the industry, up to 25 per cent of the code hours; and to appoint a research and planning committee to administer the curtailment. G. H. Dorr, president, and Paul B. Halstead, secretary, of the Cotton-Textile Institute, and W. Ray Bell, president, Association of Cotton Textile Merchants of New York, were appointed to constitute this committee. Effective April 1, curtailment of operation in three groups of the industry—wide sheetings, print cloths, and carded sales yarn—was effected after these groups had met and applied for the curtailment. The period covered by the 25 per cent curtailment order in these groups was the 11 weeks beginning April 1. Some other groups within the industry met to discuss curtailment, and adjourned without taking action. Some individual mill men expressed their position as being that a 25 per cent curtailment from the maximum "hadn't gotten down to our conditions yet"; meaning they were already operating well under 75 per cent of the code capacity.

This change in procedure, permitting the code authority to authorize curtailment in any particular groups within the industry, if carried out properly, should mean that in the future such restrictive measures can be applied promptly enough under an emergency to effect some good. The old story to the effect that "the operation was successful but the patient died", has seemed appropos of the circumstances on some past occasions when red tape and complicated procedure so delayed any action being taken that the opportunity for correcting a condition had been exhausted before relief was applied.

At the same time, there is a growing sentiment among many in the industry against government-directed curtailment plans and other such activities. It is not only growing, it is becoming more and more articulate.

So perhaps there will be more "fireworks". Perhaps since the effects of their expressed opposition to the processing tax has made the opposers "use their wings", there may be further articulation with the issues brought out into the open. In any event, participants and observers should find the coming months as absorbingly interesting as were those days of two years ago—remember?—when it was a case of code-making, and not code-operation and destruction.

While it has not yet developed into a public expression of collective thought, it cannot be denied that there is a growing sentiment among textile mill executives, both North and South, that for too long they have played the role of the "fair haired boys" in the great alphabetical experiment and, as such, have submissively permitted their industry to serve as the laboratory for the testing of all the theories of those who profess to know all the answers.

It is not surprising that there is a growing realization on the part of the textile mill men, that after all, the stockholders and the management are real—though perhaps silent—parties to the great partnership. So far only labor and the consuming public (of whom at least 20 per cent are employees of some government agency) have been given any consideration, but it seems to have finally dawned on at least a few industrialists that, they can't continue indefinitely, the practice of paying wages out of the capital structure of a business.

So there are those who are saying, in vigorous terms, that the textile industry has been the goat long enough and that the time has come for more than a passive resistance to the endless "isms" of a bureaucracy, and that if the industry is to survive, those who are responsible for its survival must have the intestinal fortitude (most of them don't express it so politely) to stand up for their rights and demand some voice in the making of the rules and regulations under which they have been forced to operate.

Perhaps the whole attitude of these now almost "ragged individualists" may be best expressed by one "loud-speaker" in the industry who recently stated that he had investigated living conditions at both the Federal prison and the county poor house, and having found the comforts and conveniences of the prison superior, he preferred to be sent there for honestly contending for the life, liberty and pursuit of happiness which a once proud document guarantees, instead of having to wind up in the poor house, as a result of blindly following and submitting to policies and philosophies that he knows to be economically unsound and politically unjust.

The Scavenger Roll

The purpose of this department is to pick up ideas from this mill and that, and deposit them here for you and others in pithy paragraphs. If you haven't already told us whether you like it or not, please do so now. The Scavenger Roll will welcome also suggested topics and paragraphs from readers. Let us hear from you . . . . . .

The New Kind of Operating Executive

We believe there has never been a period in the industrial history of this country when the success or failure of a manufacturing enterprise depended as much as at present on the efficiency and loyalty of its labor organization. In other days, inefficiencies could be offset by reductions of wages and fear could be depended upon to inspire loyalty to a far greater extent than obtains since the Federal Government has become a potent factor in employer-employee relationship. Minimum wage scales, fixed effort provisions, collective bargaining, etc., etc., etc., mean, among many other things, that the superintendents and overseers and personnel directors of our mills have to face squarely the fact that other means must be used to promote operative efficiency and loyalty than those heretofore considered satisfactory and successful.

This thought struck us forcibly a short time ago when a certain mill we were visiting was "laying off" several spinners, spooler hands and roving frame tenders who were not making the minimum wage and whose pay had been supplemented for several weeks. The superintendent responsible for this "cracking down" on these unfortunate employees was berating to an experienced employment man or personnel director or industrial relationship supervisor of another mill the poor quality of this "help" he had had to discharge and how generally inefficient were the operatives he had to employ from his particular section.

"Well," was the personnel director's reply, "there are several ways of looking at that kind of problem. I've seen hands who apparently would never make the grade, although they seemed to be trying hard enough. Then I've seen an overseer or second hand get with those people, explain their work to them, show them how to do it a little more quickly and easily, give them a figurative slap on the back and a word of encouragement. And many of them will come through and develop into excellent operatives. There are some who can't produce because of physical and/or mental traits and handicaps, but often such people can be transferred to work for which they are better suited. So it isn't always the fault of the hands themselves that they aren't meeting requirements; it's often the fault of those in charge of mills or departments."

These words impress us as an expression of wisdom born of experience. We know there are superintendents and overseers who will say, as long as they are running jobs, the operatives have to produce or get out and that is all there is to it. We are not trying to make college cheer leaders and "pep talkers" of men in charge of mills and departments. But we do believe there are real present and future dividends in promoting employee efficiency and loyalty by methods briefly described by our friend. Such tactics and work may make an overseer's job harder for the present, may require that he be more of a diplomat than formerly, but in the long run he, his company and his employees will benefit thereby. And we'll wager a new zest and zip and interest will have been added to the job.

What Do You Know About "Break Draft"?

We suppose the thought has been expressed several million times that there are wide divergencies of opinion among practical mill men as to machinery layouts for obtaining given results. One of these differences that has been called to our attention within the last year or so is that of break drafting. The longest break draft we ever saw on regular three-roll spinning was nine teeth. (That isn't an accurate way to express break draft, we know, but we don't know the constant in any cases we shall mention so, begging your pardon, will state the break draft in number of teeth). The mill using this break draft had for years and years received a premium on its carded hosiery yarns—we learned that from some of its competitors. We experimented on our own account some years ago and settled on five teeth difference between middle and back roll gears on spinning. There are mills using three teeth difference and others eight, and no doubt plenty of others in the intermediate stages. Perhaps some very old spinning is running with only one or two teeth break draft. What, will some of our friends advise us, is the proper break draft to use on slubbers, intermediates, speeders and spinning for various types and lengths of cotton. different classes of work, and weighted or self-weighted top middle spinning rolls? We don't expect any one man to cover the entire range of yarn numbers, etc., but if we can get a few replies from several practical men we are confident we'll know more about the question than we do now (and please heap coals of fire on our head by giving break draft constants!)

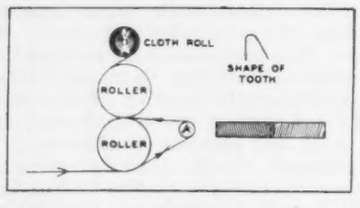
How About Top Roll Weights?

Rather than an informative page we fear we are becoming an inquisitive one. For we need information on top roll weighting on spinning. There is, or has been, evidently a lot of difference of opinion on this point also. If you don't believe it, check the top roll weighting of different makes and models of frames in several mills. What is the proper distribution of weight between three lines of rolls? What is the amount of weight that should be used on various staples, numbers, drafts, etc? When a mill changes from 100s to 24s, as some mills do, is the top roll weighting sufficient for the heavier work? If not, is anything done about it?

While on this subject may we mention that in our opinion sufficient attention isn't given to top rolls, levers, screws, saddles, and stirrups when the frames are overhauled? There is a tendency in many mills to consider overhauling as consisting of merely levelling, aligning and plumbing spindles—with a few variations. Steel rolls may or not be cleaned. But top rolls are slapped in, or disregarded, without considering worn stirrups, levers and screws and how the saddle screws are set. And while spindles and guides out of plumb can tear down ends and make work run badly, badly worn and improperly adjusted parts of the top roll weighting mechanism can make weak yarn and variations in numbers for months without attracting much attention.

A Cloth Room Kink

A superintendent has told us of his solution of wrinkles in cloth shipped on rolls. On his rolling machine he installed a 2-inch roll with right- and left-hand threads running outwardly from the center, three threads per inch being found best on the job. The ends of the roll are seated in roller bearings and the roll revolves only by friction with the cloth. This is much better than the stationary, curved screw, he tells us, and enough tension can be put on the cloth by this revolving screw to stretch the cloth. (If this roll were positively driven at a higher speed than the travel of the cloth, even more spreading tension would be obtained.) We were telling another mill man about this device and he showed us his version of the same principle. We sketch it herewith. The driven shaft A is



threaded right- and left-hand beginning at the center as sketched. It travels at a high rate of speed, much faster than the travel of the cloth, so that the thread has a tendency to spread the goods and remove wrinkles.

Textile Week in Greenville Provides Profitable Occasion for All

Here is an account of the Show and related activities at Greenville, which started April out as THE convention and exposition month for textiles . .

TEXTILE WEEK in Greenville was a complete success. With the Eleventh Southern Textile Exposition occupying the position of most general interest, and as a nucleus for a number of related activities, the week proved to be an occasion of maximum value, interest and pleasure for exhibitors and mill men and other visitors.

The exposition was held in Textile Hall during the week of April 8 to 13 inclusive. Postponed from its scheduled date of last October, due to emergency conditions existing at that time, the exposition profited immensely from this change of schedule. The best show ever held, by all odds—was the characterization of one veteran exhibitor, and this opinion was enthusiastically endorsed by practically unanimous expressions from other exhibitors and visiting mill men.

Two Helpful Improvements

This report will cover generally the more important activities of Show Week, with a brief comment on some of the conspicuous phases of the show itself. First, considering the exposition generally, its arrangement, management, and the number of interesting exhibits were notable; and there were several new policies instituted by the management which contributed to its unqualified success. A new rule prohibiting children under 16 years of age, for example, together with announcement that only on Monday and Saturday was the general public invited, removed the inconvenience of mobs of curious but wholly uninterested crowds which in the past have confused and complicated the true function of not only this exposition but of all others designed to serve a particular industry and then thrown open to milling throngs of school children and souvenir hunters.

The management is to be sincerely congratulated upon this step to intensify the "quality" of the attendance without entirely preventing those with a definite outside interest to study the show on certain days. Throughout the week exhibitors were high in their praise of this new policy, and unquestionably it will be continued at the Greenville show and, it is hoped, emulated as far as practical in other exhibitions in this industry. Many mill men also expressed commendation of this arrangement which permitted them to achieve the object of their visit without the interruption and inconvenience resulting from throngs of outsiders.

Another feature of definite value to exhibitors was the use for the first time of different-colored lapel buttons to identify the various classifications of mill men. The exposition management supplied these buttons, carrying the monogram of the exposition, to all mill men—a gray button indicating its wearer as occupying an executive position above that of superintendent; with superintendents wearing blue buttons; overseers green buttons; master mechanics orange buttons, etc. This feature, inaugurated at this year's show, achieved surprising interest and value which will no doubt increase with its further use in the future.

These and other evidences of thoughtful management provide the opportunity to extend specifically an expression of thanks and congratulation from exhibitors and visitors alike to the exposition management upon the excellent operation of the show. Few individual exhibitors and mill men have opportunity to realize the stupendous task involved in preparing, arranging, decorating and operating an undertaking of this size and importance. Manager William G. Sirrine and his able corps of assistants deserve highest praise for the smooth, consistent execution of their responsibilities.

Preference for Spring 1937

Though it was the result of an emergency condition which existed in the industry last fall, the postponement of the exposition until the spring of the year met with the unqualified approval of a majority of the exhibitors. An informal canvass among a

A view of the first floor of main building at Greenville . . .

Looking down on the second floor at Textile Hall last month . . .

large number of exhibitors and mill men indicated an overwhelming preference that, if practicable, the schedule be now changed so that the Greenville show will be held regularly in the spring instead of the fall—making the next exposition come two years hence—the spring of 1937, instead of the fall of 1936. A number of different reasons were advanced for this preference, it being generally felt that experience in the industry is that there is a better economic psychology, the prospects of better weather conditions, and definite reasons for better attendance in the spring than in the fall. It is certain that full consideration will be given this general preference, and that it will be met by the exposition directors and management if possible. Many suggested that a date somewhat later than the week of the show this year might serve better as a guarantee for good weather, and dispose of the possibility of the show coming too close, for the convenience of exhibitors and mill men, to the regular date of the Knitting Arts Exhibition in Philadelphia; many having interest in and desiring to attend both of these shows.

No official count of attendance at the exposition is made, but observation and inquiry among exhibitors make it certain that this year's exposition attracted by far the largest interested attendance of mill men in the history of textile expositions in this country. Every exhibitor interviewed expressed complete satisfaction in the show. The absence of outsiders made contact with those visitors for whom the show is conducted a simpler task. Never has there been so much definite indication of genuine interest in new equipment, supplies and services, as this show produced. The mill that did not have at least one—most of them had more—representatives there during the week was decidedly the exception. The interest they displayed took the form in many instances of direct sales of the products exhibited, but the larger, fundamental function of the show—to provide opportunity for inspection and discussion of new machinery, supplies and services, and for contact between mill men and representatives of companies serving the industry—was achieved beyond question and to the complete satisfaction of all concerned. The lapel buttons of identification revealed that by far the green and blue buttons of operating executives were preponderately in the majority, and many exhibitors commented upon this as an indication that the presence of these men gave them the opportunity of contacting the groups which largely have the responsibility of recommending, purchasing and using their products.

Greenville as a community rose as usual to the problem of handling the overflow of visitors which months previous had taxed the accommodations of the city's hotels. In a spirit of civic co-operation, many of the best homes of the city were made available to visitors, who were high in their praise of this hospitality and the efficient manner in which their needs for comfortable living quarters were handled.

The exposition was open from 10:00 A. M. to 10:00 P. M., each day from Monday through Friday, and from 10:00 A. M. until 6:00 P. M., on Saturday. Informal exercises on the second floor of the main building officially opened the show. Franklin W. Hobbs, chairman of the board of The Textile Foundation, and Goldthwaithe H. Dorr, president of The Cotton-Textile Institute, Inc., were the speakers—they being introduced by S. M. Beattie, president of the Cotton Manufacturers Association of South Carolina. Both speakers, while congratulating the industry upon the progress making possible the great exhibition, courageously defended it against the continuance of legislation and other activities unfair to it.

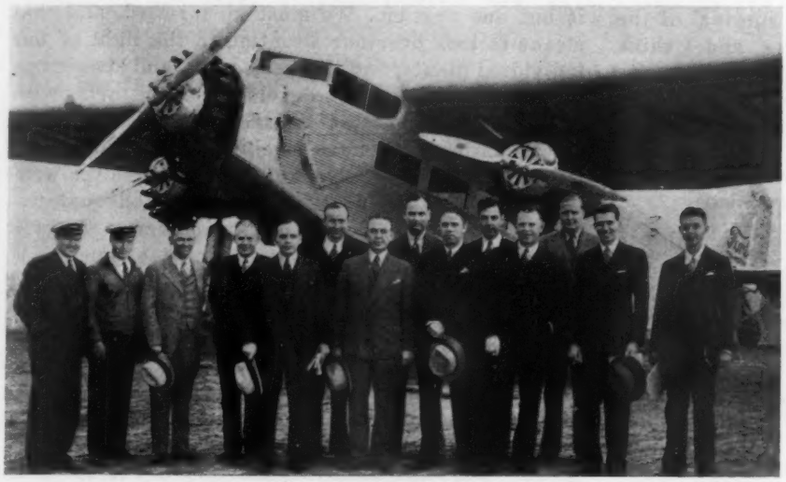
Textile School Men Meet

There were during the week several meetings of related interests. Under the auspices of The Textile Foundation, which is sponsoring a study for the improvement of textile education, the directors of the country's textile schools were in attendance at the show during the week, and on Tuesday, April 9, attended several meetings, one a luncheon given by the Greenville chamber of commerce, and other business sessions to discuss the work of the Foundation with respect to the schools. Edward T. Pickard, secretary of the Foundation and chief of the textile division of the Bureau of Foreign and Domestic Commerce, Washington, was, with Mr. Hobbs, in charge of these meetings. The textile school directors culminated their week with a visit to the textile department at Clemson College, near Greenville, as the guests of Dean H. H. Willis.

Lowell Alumni Gather

On Tuesday evening, April 9, there was a dinner meeting of alumni of the Lowell Textile Institute, with Harold P. Goller as chairman, and with Charles H. Eames, president of the institution, as chief speaker. This provided an opportunity for alumni of the school to renew old acquaintances, and to hear its chief executive, who described the work being carried on, and reported that L. T. I. now is authorized to award a master's degree. It is planned by leaders among the alumni group to work toward the

Pepperell Men Who Flew from Lindale to Textile Show



The men shown above, representing the operating executive force of the Pepperell Mfg. Co., Lindale, Ga., had the distinction of going to the textile show by plane in a group. They made the trip in the tri-motored ship shown in the background, leaving Lindale at 6:00 A. M., spending a full day at the show, and arriving home at 5:55 P. M.

In the picture, left to right, are: Pilot of plane, co-pilot; C. W. Burrum, overseer of weaving; B. W. Moak, overseer of carding; R. D. Harvey, assistant agent and superintendent; Comer Turley, mechanical superintendent; J. D. Walker, overseer of slashing; G. E. Glenn, Jr., assistant superintendent; T. P. Hay, Jr., designer; H. T. Gilbert, Jr., assistant overseer of carding; H. P. Lloyd, overseer of finishing; G. H. Smith, overseer of spinning; R. J. McCamy, assistant overseer of dyeing; and James A. Byars, office.

permanent organization of Lowell men in the South. Those in attendance at this meeting, which was held at Dave Stansell's place, included:

H. S. Adams, Chester, S. C., Carl D. Brandt, Lubbock, Texas, L. W. Cleveland, Swannanoa, N. C., Harold P. Goller, E. S. Cummings, H. S. Cheney, George P. Feindel, J. C. Robertson, Charles G. Stover, and H. S. Williams, of Greenville, S. C., Parker H. DelPlaine, A. Kempton Haynes, Ira Stone, and Arthur R. Thompson, Jr., of Charlotte, N. C., A. R. Fuller, Decatur, Ill., H. C. Roberts, Philadelphia, Pa., Edwin Fowle, New York City, Edwin Hadley, Springfield, Vt., Howard R. Hart, Bath, S. C., Douglas F. Williamson, Blue Mountain, Ala., Earle Wilmot, Ware Shoals, S. C., A. E. Jury, Winnsboro, S. C., Newton G. Hardie, Inman, S. C., L. A. Savage, Newberry, S. C., R. L. Sanborn, Gastonia, N. C., and Charles H. Eames, Lowell, Mass.

A. S. M. E. Meeting

Wednesday, April 10, brought the meeting of the textile division of the American Society of Mechanical Engineers, held under the auspices of the Greenville section. There was a technical session on Wednesday morning, with G. P. Patterson, of Atlanta, and R. M. Gates, vice-president of the Combustion Engineering Corporation, New York City, and C. D. Blackwelder and L. W. Burdette, of J. E. Sirrine & Company, Greenville, as the speakers, and a dinner on Wednesday evening with Frederick M. Feiker, executive secretary of the American Engineering Council, Washington, D. C., and Ernest Hartford, of A. S. M. E., as speakers.

U. S. Research Meeting

A luncheon meeting of the U. S. Institute for Textile Research was held at the Poinsett Hotel on Thursday, April 11. The original purpose of the meeting was to consider formation of a southern section of the Institute, but it was decided to hold this plan in abeyance. John W. Arrington, president, Union Bleachery, Greenville, S. C., who is one of the southern directors of the research organization, presided at the luncheon, which was featured by talks by C. H. Clark, secretary of the institute, and H. Dewitt Smith, of A. M. Tenney Associates, one of the organization's officials. These speakers told of the formation of the Institute to supply a need in the industry for a research organization, and reported on its accomplishments to date since its organization four years ago. There are now two life members, 53 contributing members, and 208 annual members; with 43 members in the South. The speakers related how the Institute had done its first work in conjunction with The Textile Foundation and had suggested some of the Foundation's subsequent projects. They dwelt particularly on what had been accomplished to date in connection with the Institute's study of warp sizing, which took first definite form at a meeting in New York last May, and which has been continued, through the co-operation of contributing mills and sizing materials concerns, by the appointment of a sub-committee to compile a bibliography of literature on the subject and later, with the services of a chemist engaged for the purpose, to conduct investigations and experiments in this important phase of cotton and rayon processing. The establishment of a central textile library, and means for co-ordinating practical and scientific research work and the interpretation of scientific work in practical terms, were cited as objectives of the organization for the early future.

S. T. A. Hears Sirrine

Aside from the exposition itself, the event of chief interest to mill operating executives was the luncheon meeting of the Southern Textile Association, which was held on Friday, April 12, at Dave Stansell's Place. Culver Batson, president of the Association, was toastmaster. The feature of the program was an extemporaneous address by J. E. Sirrine, of J. E. Sirrine & Company, Greenville, S. C., one of the country's leading mill engineers. Speaking briefly, and with characteristic forcefulness, to this group of mill men, he paid tribute to their skill and enterprise, pointing out that, with recent years, with the average hourly earnings increased by about five times, the labor cost is about twice that of what it was previously. He considered the fact that this has been achieved, in many cases, without new machinery, as a compliment to the men in charge of the mills and departments.

Mr. Sirrine discussed general conditions in the industry, stating that "This industry is in a very serious condition. I am by nature an optimist, but it seems to me that under present conditions we must take stock, and decide what we are going to do. This thing of attempting to build an umbrella large

enough for everyone to get under has proven to be a failure every time it has been tried. There will never be a time when the law of the survival of the fittest will not pertain to some degree, and I think you gentlemen are face to face with the necessity of deciding whether you are going forward, or going backward; you certainly cannot stand still, for that is certainly going backward.

The Problem of Japanese Competition

"This industry is facing competition from abroad that is almost insurmountable," said Mr. Sirrine. He told a story of asking a Japanese manufacturer how that country could make such rapid strides as Japan is now making, and was told that the answer was that whereas the United States pays $15.00 to $16.00 a week for 40 hours of labor, and Great Britain pays

Culver Batson

J. E. Sirrine

Marshall Dilling

Mr. Batson is president of the Southern Textile Association; Mr. Sirrine addressed the organization's Greenville meeting; and Mr. Dilling was signally honored with a distinguished service medal, created especially for him

$8.50 for 48 hours, Japan pays $1.68 for 60 hours. "We cannot meet that competition," said Mr. Sirrine, "and there is no point in our trying to do so. We can do something to protect ourselves from it, and about the only way it can be done is to effect a practical embargo. But if all outside influences were removed, we face the fact that we have a steadily diminishing home market. In 1927 we sold 71½ yards per capita; last year it had decreased to about 54 yards per capital. The reason is the people have not had the money to buy it. We have now forced the cost of our products to a level higher than that of many other things. We have been forced to sell a commodity out of range with other things and out of the income of a large majority of our people. I do not believe in very long hours or very low wages; it has been unfortunate that we have in the past had to pay low wages, but I do not think we ever paid as low as we got credit for; but I do think we must be in a position so that we can liquidate our costs when necessary in what appears to be the safest and soundest way. I think that is in improving our methods and using better tools, for regardless of all other conditions, those people are successful who do these things best. There will of course be some casualties on the firing line. Many mills will pass out of the picture, and some should. There are three things that will do this: poor equipment, adverse location, and bad management, or a combination of any of them.

"We must make up our minds as to whether we are going to stay in business. I do not think there is but one answer. We must go forward, and that means to look over our situation in the light of our individual plants, find the weak spots, and strengthen them. This is one of the oldest of the arts, with high standards. There has been a certain amount of stagnation. We have machinery that will last a long time, it is expensive, and we find ourselves wondering whether or not there is sufficient adequate return in the purchase of new machinery. I think there are advantages that you cannot estimate. If you ask what you get out of putting in new long draft spinning, you can figure the savings in the card room, and so on, but beyond that are advantages that you cannot measure. I have never known of a case where a man has put in new equipment that he was not glad of it. We are in the beginning of a development in this industry, calling for a new technique. You have seen this industry is beginning to find itself in the way of better tools to a degree ahead of anything ever done before, but to me it is something more than a matter of technical and academic interest. It is your salvation. If you do not improve your methods you are on your way out and you might as well liquidate. You cannot stand still. These short hours are here to stay; better wages are here to stay, and you are not going back to the old system of very long hours and low wages. You must meet competition from abroad and from other fabrics, by the use of better tools and better methods. You can do that with profit to yourselves, your operatives, and your stockholders. You will improve in morale, make better working conditions, and lift this industry out of the doldrums.

"Everybody is now bewildered. We have been laying a great many of our troubles to the processing tax. The big trouble is that the public mind is confused. Buying power is not being used to the extent that it should be used. We must give the public a better article at a better price.

"As a parting word, make up your minds that the old methods are not good enough, that the old tools are not good enough. You must meet this situation squarely, and the degree of success you attain will depend upon the effort you put into it."

Marshall Dilling Again Honored

At the conclusion of Mr. Sirrine's address, Mr. Batson called upon H. H. Iler, past-president of the Association, who, on behalf of the organization, presented to Marshall Dilling, executive secretary of the organization, a Distinguished Service Medal, in appreciation of the work he has done in its behalf. This was a medal designed especially for Mr. Dilling, who for years has been the guiding force of the organization's activities. He is the only life member of the association, and is one of two men who has received the S. B. Alexander medal for outstanding service. The appreciation of the tremendous value of his work and example was most appropriately expressed in the award of this special medal, and Mr. Iler fittingly voiced the sentiments of the members in presenting it to Mr. Dilling.

Some Highlights of the Exhibits at Greenville

A panorama of developments--new, established and refined--comprised the Greenville textile exposition, which drew the largest, most interested attendance on record

As a whole, and considered individually, the exhibits comprising the 11th Southern Textile Exposition presented a panorama of progress in textile manufacturing. An extensive display of entirely new equipment, supplies and services, together with previously exhibited products involving refinement and improvement, fully merited the intense interest manifested by the unprecedented attendance of mill men.

Space limitations and the inadequacy of second-hand description preclude even mention of every individual item, but a brief presentation of most of the newer and more significant features of the show will be given. Operating exhibits, of course, attracted the greatest amount of attention, perhaps, but the manifestation of services, etc., which do not lend themselves to definite mention, constituted as always a most important part of the exhibition.

The Mill Machinery

Taking up first the productive machinery, and of that, the weaving, there were two looms in operation at the Draper loom embodying the application of the X model features to a 25-harness dobby loom, known as the XK, and to a wide sheeting loom, known as XL. The former was a 40-inch double fork loom, running 172 picks per minute with a 25-harness C&K dobby, weaving a 20 harness dobby pattern 76x72, with 40s cotton warp and 50s cotton filling. The XL was a 90-inch double fork loom running 124 picks per minute, weaving 68x72 sheeting, 22s warp and 21s filling. There was also a 40-inch double fork X model loom running 192 picks, on 64x60 print cloth, 28s warp, 36s filling. A 40-inch C model shuttle-changing loom running 144 picks on a 2-harness rayon, 72x50, a 40-inch single fork E model running 160 picks on 64x60 prints, and a 40-inch A-1 model Draper Stafford shuttle-changing loom running 150 picks on 84x80 lawn, 85s warp, 110s filling, were also in operation.

The Crompton & Knowles exhibit comprised models of their new lines including a Type C3, 33-inch, 4-harness, 2x1 box, terry towel loom, with 8¾x1⅛-inch bobbin, on 3 pick toweling at 182 p.p.m.; a Type C3, 48-inch, 16-harness, 2x1 box, head motion loom, weaving plaid cotton pants goods, and equipped with a Knowles head motion and using the large 8¾x1⅝-inch bobbin; a Type S3, 56-inch, 20-harness, Knowles head motion 2x1 box shuttle changing Super-silk loom; a Type S4, 56-inch, 4x1 box, 20-harness dobby 75 per cent automatic shuttle-changing Super-silk loom; and a Type W3, 92-inch, 26-harness, high speed woolen loom, weaving men's overcoating.

Familiar types of warp stop motion equipment were augmented by an automatic electric harness warp stop motion, improved, with a new selvage harness attachment in operation. All-metal cushion reeds for rayon weaving, pitch band reeds for various fabrics, and reeds and combs for warpers, etc., as well as a machine for truing and matching shuttles, were other weaving appurtenances in operating displays. Special emphasis in a pick counter exhibit was devoted to a two-shift resetting pick counter with recent improvements, and another line of pick counters for single, double- and three-shift purposes, continuous and resettable, was shown.

A section of a recent type of double beam and ball bearing tenter in operation was among the finishing machinery. A four-blade cotton trimming shear arranged to have two blades working on the face of the goods and two blades on the back of the goods, with self-interrupting and selective finger mechanism was in operation. Another shearing machine with cutters for both sides of the goods for removing projecting threads on the selvages and also surface threads on the face and back of the goods in one operation, was equipped with a newly designed automatic seam protecting device for throwing the cloth out of contact with the cutting parts when seams pass through.

Warp preparation equipment included the application of a knot-tying head mechanism to the circulating spindle machine, which increases the production of the operator by about 50 per cent. This head automatically finds the ends of the cone and of the supply bobbin, the latter being fed from a rotating battery, and ties the knot, leaving as the chief task of the operator the filling of the supply bobbin container. The rotary guide winder with intersecting groove was shown in improved form; and a new type of rotary guide, which replacing the reciprocating cam traverse, uses a grooved, tapered roll in which the groove does not intersect. The automatic spooler and Super-speed warper were in operation with a number of improvements, the latter running at 900 yards per minute, and the former, running at 1,200 yards a minute, producing packages containing 70 per cent more yarn than formerly. A newcomer to the show was a spindleless standard winder and various types of patented expanding swifts for winding silk and rayon yarns. A new portable warp tying machine for tying rayon and silk warps was operated. There were improved slub catchers, tension devices, etc., for winders. An improved and simplified machine for conditioning yarn was shown in constant operation.

Spinning was represented chiefly by a large package, 3-inch ring frame, various types of drives, new and improved types of roll coverings of different kinds, a new principle of long draft spinning, etc. A new ring for twisters, self-lubricated, and running at high speed, with long traveler life, attracted at-

Patent Office Officials Visit Textile Show

Without ostentation or the fanfare of trumpets, the U. S. Patent Office has co-operated with Textile Hall Corporation during the 1932 and 1935 textile machinery shows by sending examiners from Division 21, Textiles, to observe recent improvements in textile machinery.

T. J. Thompson, chief of the textile division, and his assistant, Carl W. Robinson, visited the 1932 show.

This year Examiners Paul J. Schmitz, Donald W. Parker and Fritz B. Peterson spent two full days at the Show and later visited some of the leading cotton and rayon plants in and near Greenville.

The Patent Office is to be congratulated upon its interest in keeping its officials informed concerning recent improvements in textile machinery. There is a vast difference between reading about such changes in patent applications and seeing them in actual operation.

The practice of sending observers, already familiar with the theory of the textile art, to study the latest commercial practices is a most practical contribution to all phases of textile manufacturing. It is bound to result in a better understanding of mutual problems between the Patent Office and the manufacturers of textile machinery, and this will be followed by greater advances in manufacturing processes which will benefit the mills and the general public.

The present policy is so clearly in the interests of common sense and the public good that it ought to be made permanent.

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tention. There was a new anti-friction bearing tape tension pulley for spinning frames shown along with the improved roller bearing spindle.

Of great interest in connection with the card room were model exhibits of the different types of long draft roving and Super-draft roving mechanisms; demonstrations of repair services on rolls, flyers, etc. A roll spacing determinator, applicable to roving and spinning frames, a roving tester and a sliver tester, were other equipment of definite interest. The Gyrator type of cleaning, blending, opening and distributing equipment was in operation, and there was a demonstration of the Rogers air filter for pickers which makes a dust chamber unnecessary. There were two types of regain indicators for the picker room. A new type of bronze bearing for roll saddles attracted considerable attention.

Under humidification and air conditioning, there was an operating model textile mill fully and automatically air-conditioned and humidified, demonstrating the principle of an automatic air-changer in controlling the temperature, humidity and ventilation of a mill.

Two types of automatic traveling cleaners for spinning, twisting, and other machinery, were in operation, one traveling around a continuous track, the other traveling back and forth over a single piece of track.

New Power Transmission Developments

Aside from the strictly productive and allied equipment, and equalling it in interest and eclipsing it in extent, were a large number of exhibits concentrated upon power transmission, with particular reference to types of drive from motor to machine. Visitors with specific engineering tendencies found in these exhibits perhaps the most outstanding presentations of the show. Of especial note was a co-operative exhibit designed to demonstrate comparatively group and unit motor drive, under the auspices of the Power Transmission Council. Individual companies showed improvements on established forms of variable speed drives and pivoted base and tension control bases for motors in textile applications, and a number of belt producers had demonstrations available to all visitors for testing comparative results from different types of belting. There were as a high spot in the power transmitting exhibits several new types of variable speed drives, including one operating electrically, another mechanically, another based on the hydraulic principle, another containing both an electric motor and a change speed mechanism operating without the use of gears or belts.

These new developments, some of which have been covered in detail in these columns, and others of which will be treated in the near future, afforded a striking demonstration of the interest being displayed in increasing amount by textile mills in their power problems, as well as of the recognition of manufacturers of this type of equipment of the importance of the textile manufacturing industry as a market for intelligently developed and applied products of this kind.

This same recognition on the part of manufacturers of temperature control and regulating devices, particularly with reference to the problems of slashing and room temperature regulation was again evidenced by extensive displays of products of this kind.

Several rayon manufacturers maintained displays of the newer developments in rayon fabrics and yarns, including superfine filament and pre-treated yarns.

There were as usual complete lines of motors, controls, switches, belting of different types, ball and roller bearings, pulleys, valves, traps, conduits and other supplies of this character.

Loom parts, card clothing (shown being manufactured), bundle-tying machines, lifting trucks, belt lacing equipment, roving cans, spools and bobbins, and shuttles, electric refrigeration, piping, automatic stokers, pumps, sewing machines, calculating machines, stainless steel, Monel metal, roving and filling bobbin cleaning machines, travelers for spinning and twisting, systems and products for machine lubrication, were, to select a few classes at random, among the other products displayed, along with others which broadened the scope of the exhibition and presented a virtually complete panorama of products of interest to the textile man. In addition to the actual displays, many companies serving the industry maintained reception spaces, without exhibits, where many a conference pertaining to particular services resulted in mutual benefit to the producer and consumer. As always, the value of the exhibition to the exhibitors is in the number of interested visitors it attracts; and its value to the mills is in the opportunity provided for investigating the available up-to-date machinery, equipment and supplies and services. On both points, the 11th Southern Textile Exposition measured up to every expectation, and established new records of interest and value.

Raleigh Meeting Hears F. E. Rowe and Discusses Carding-Spinning

PROGRESS in carding and spinning, and practical discussion of these departments, featured the meeting of the Eastern Carolina Division of the Southern Textile Association, held at the textile department of N. C. State College, Raleigh, N. C., on Thursday, April 25, in conjunction with the annual textile style show held by the textile school there. M. R. Harden, superintendent, Erwin Cotton Mill No. 4, presided as chairman.

In an election of officers held during the meeting, P. B. Parks, of Erwin Cotton Mills was made chairman; T. W. Mullen, of Rosemary Mfg. Co., Rosemary, N. C., vice-chairman; W. H. Miley, Jr., of Erwin, N. C., secretary—and the new executive committee is composed of M. R. Harden, D. F. Lanier, J. V. McCombs, George F. Brietz, and Professor J. T. Hilton, of N. C. State.

Address by Frank Rowe

The outstanding feature of the program was an address by Frank E. Rowe, Jr., sales engineer of Saco-Lowell Shops, who presented an interesting account of the "reasons why", back of recent developments in cotton mill machinery, particularly those in opening and picking. In beginning, Mr. Rowe explained that machinery developments and improvements come almost

FRANK E. ROWE, Jr., sales engineer, Saco-Lowell Shops, who spoke at the Raleigh meeting of the Eastern Carolina Division . . . . .

entirely from one or the other of two sources—a demand from the mills for ways and means of doing something better or cheaper or both, and a recognition by the machinery shops of improvements needed by the mills which would more than justify their purchase and in many cases anticipate their needs and demands. In either case, he pointed out, most developments as a whole have finally arrived through active co-operation between the mills and the shops. Taking up the opening and picking departments, Mr. Rowe said in part:

"From some time in the 1870s until about 1912 it seems to have been the general attitude of mill men in general that opening and picking were 'necessary evils' and because of this and the fact that during this time cheap labor was more than plentiful, there was little incentive to make changes in these departments.

"Taking the opening room first, up to about 1912 the general method of handling stock in this department was to open the bales and then distribute pieces from many bales in alternate layers in large bins. The stock thus blended was allowed to stand anywhere from two to five days in this condition before being used. The theory of this standing was to allow the stock to become more uniformly conditioned than it was in the baled form. This theory has since largely been disproved and many tests show that even *opened* cotton after standing in bins for several days had reached a moisture condition comparable to the air condition of the room to a depth of only a few inches in from the outside of the pile. The real advantage of the bin mix was the very high degree of blending that was accomplished.

"This system of opening was fairly easy to obtain so long as the mills were buying gin or soft bales, but when the use of high density or export bales began to be quite common, and as I recall this—it was about 1914, other means had to be devised to open this band pressed cotton.

"Beside this difficulty, there were other objections to the bin system, such as the large inventory of opened cotton, the extra labor involved in handling this stock twice and the considerable fire hazard that the insurance companies were complaining about.

"With the objections to the bin system growing, for one or all of the reasons mentioned before, the shops and the mills got together and the bale breaker for handling both hard and soft pressed bales and in large production was the result. With the bale breaker the automatic distributor came into general use for the bale breaker was capable of handling enough stock to take care of several breaker pickers.

"This development resulted in a saving in labor, a reduction in inventory, a reduction in fire hazard and a better opened condition of the stock being fed to the breaker pickers.

"About this time came a demand for a large capacity cleaner to follow the bale breaker and still better prepare the stock and in a mild manner clean it before presenting to the pickers, with their harsh action. This demand was largely met by the general introduction in this country of the vertical opener, which was used either singly, in tandem or in batteries of three. These machines while to a large extent were and still are openers, did a pretty good job of cleaning.

"The mills now had equipment which enabled them to deliver stock thoroughly opened and fairly well cleaned to their breaker pickers. In fact, it was common to find the breaker laps from the then new system far cleaner and as uniform as the laps had been from their intermediate pickers under their old layout.

"This development in connection with the awakening realization that too much beating was injurious to the stock, resulted in many mills throwing out their intermediate pickers, thus going from three process to two process. About the same time that this change was taking place, beater speeds were also being dropped very generally and as a whole the sum results of the developments mentioned, were saving in labor, power, a reduction in fire hazard and in many cases an improvement in the yarns being spun.

"These relatively simple, although at the time drastic, changes worked all right so long as the mills had the ability to select the proper grades and staples of cotton and the crops as a whole were high grade. But this condition did not last long due to the war and other causes which resulted in a scarcity of farm and gin labor. This resulted in a number of crops of rather low grades, and especially where sledded cotton and bollies were concerned, cottons having a very high percentage of trash, such as seed, leaf, stem, sand and motes, were what the mills had to choose from.

"This lowering in grade immediately brought demands from the mills for still further cleaning equipment and to partly meet this demand the so-called horizontal types of cleaners were developed. This machine did a pretty good job so far as removing leaf, broken seed and sand were concerned but proved itself, like most pipe line cleaners, to be treacherous. By this I mean that with usually dry cotton and a normal atmosphere, they would clean well and would not roll or curl the cotton enough to damage it. However, with slightly damp cotton and with dry cotton on humid days these cleaners, while still doing some cleaning, rolled and curled the cotton badly. This rolling and curling resulting in the impurities being locked in the cotton in such a way that the pickers could not remove them properly. This not only threw an unusual load on the cards, but the licker-in cut a considerable quantity of the badly curled fibers still in the lap, which of course resulted in an increase of waste.

more fly in the mill and in many cases a lowered breaking strength.

"Some of the shops realized the short comings of these pipe line cleaners and even before there was any great demand for a better cleaning machine than the horizontal cleaner, were already hard at work on such a machine.

"England had had a very much longer and greater experience with hard cotton than we had had and as a result there had been developed on the other side the so-called lattice bale breaker or lattice opener. These machines were equipped with 24-inch Buckley cylinders and were largely hand fed and having a large grid surface and relatively low capacity, 750 pounds per hour, were not only good openers, for there were three or four lines of large drafting rolls ahead of the Buckley,—but were also good cleaners. This machine was particularly good so far as the removal of heavy impurities with the least amount of good fiber was concerned. It also was entirely free from curling action. Realizing all of the good and bad points of this machine, the designers went ahead and produced a machine that not only had from two to two and one-half times the capacity of the English type, but was a better cleaner as well. This machine you all know as the lattice opener.

"With a capacity of 1,500 to 1,800 pounds per hour this machine was immediately available to go into the opening and cleaning line and so where it was desired eliminate the pipe line cleaner.

"The lattice *opener* being primarily a *cleaner*, it followed that to perform at its best, stock as well opened as possible should be fed to it and the tandem feeder following the bale breaker and delivering better broken up stock to the apron of the lattice opener was developed.

"Many of the early installations were laid out as mentioned: the stock going into the bale breaker, thence to the tandem feeder or direct to the lattice opener and then to one or more vertical openers, delivering to the conveyor pipe through a screen section.

"It soon became apparent that this layout could be improved upon by putting the vertical opener ahead of the lattice openers, which enabled them both to do their best work. These changes in lay-out were made with the assistance of several mills and so you can see, that while most of the developments up to the lattice opener came after the mills' demand, in this case the shops anticipated the mills' needs and had something new to offer them which was mutually advantageous.

"The result of all of these opening room developments was that the stock now delivered to the breaker pickers was beautifully opened and cleaned and only needed a slight further cleaning and then be made into a lap. This brought up the thought as to why it should be necessary to make breaker laps, compress them, then double and compress again at the feed rolls of the finishers and then subject this compressed cotton to the terrifically harsh action of the finisher beater in order to accomplish only a small amount of cleaning and really to make a lap.

"With this in mind and realizing the facts that something now must be brought out to meet the mills' demands for still further improvement, we went ahead and developed the one-process picker. This machine was really developed with the idea of making a machine that would, first: clean the stock as well as the two process and with much less injury to the fibre and produce a lap which would be far more uniform than any type of lapper then in existence.

"The shops went ahead with these ideas in mind and the co-operation of several mills whose personnel made many suggestions that were incorporated in the machines.

"You all know the results of this work for we not only accomplished the ends we set out to, but gave you further benefits in labor saving, power saving, floor space saving and better running work through the mill.

"Now with all this accomplished we ran into a new difficulty in the shape of one or two crops whose staple varied badly from a number of causes. With this came an urgent demand for ways and means to improve their blending which had been very considerably reduced, first: by the introduction of the bale breaker, which will not give anywhere near as good a blend as the bin system; second: the reduction of processes in the picker room from three process to two process and finally the reduction from two-process to one-process. All of these changes of course reduced the amount of blending formerly obtained.

"Now a bale breaker, while a large capacity machine, is a rather limited blender for there are usually only parts of from three to six bales in the hopper at any one time regardless of the apron length. Aside from the bale breaker the only available feeders were the regular picker feeders, of low capacity and not at all adapted to handling hard-baled stock. With neither of these really adaptable to use as parts of a battery of feeders to blend, clean and mix, it was up to the machinery makers to develop a machine with ability to handle hard stock, clean better than either older types and with a capacity larger than that of a picker feeder. The result is the new opening, blending and cleaning feeders. These feeders are usually arranged in batteries of three to six delivering to a mixing feed table which in turn delivers to the cleaning machinery. The hoppers of these blending feeders will ordinarily hold parts of five or six bales each, so that with a battery of three feeders and a six-bale mix to the feeder, you now have an 18-bale mix, which is probably fully as good as ever was obtained from the bin system."

Summing the advantages of these developments, changes in methods and improvements in opening and picking, Mr. Rowe pointed out that: "First, you are getting evener, cleaner and more uniform laps, with the resultant improvement in better running work through the mill; and, second, you are accomplishing all of the improvements and benefits mentioned with very definite savings in labor, power, floor space, inventory and maintenance."

Following Mr. Rowe's address, there was a brief discussion on carding and spinning problems. The first section, covering carding, was conducted by D. F. Lanier, superintendent, Oxford (N. C.) Cotton Mills, who asked for discussion by anyone with experience on the "pin-point", or side-grinder for card clothing. M. R. Harden, superintendent, Mill No. 4, Erwin Cotton Mills, stated that his first experiment with this type of grinder was not so good. "It takes about two hours to get it on and adjusted," he said. "I think it is a good thing if it is done correctly. It grinds the sides of the wire instead of the top. You have a place for putting in your discs, and these discs

M. R. HARDEN, superintendent, Mill No. 4, Erwin Cotton Mills Co., retiring chairman of the division . . .

go down and revolve between the wire. It slips over one wire and into another automatically."

Asked how many cards a man using this grinder could grind, Mr. Harden replied that this equipment provides more a process of overhauling than regular grinding; that this machine is used to re-condition clothing. "I would recommend that this point grinder be used every four years," he added. "If you grind too deep it takes the temper out of the wire." "Since there are a good many more points per inch in a 120 wire than a 90, could you use the same disc for all wires?", was asked. "Yes," replied Mr. Harden, "because the disc goes all the way across." T. W. Mullen reported the intention to secure and try one of the new solid wheel grinders.

Mr. Odum asked for discussion on regular grinding of card flats. Frank E. Rowe, Jr., discussed the question, stating that all drums should be ground concave, "because you get a uniform setting if you have them accurately concaved. It does not involve much cost, either, because old drums can be re-wooded at a low cost."

The question of the life of card clothing was mentioned. Several members gave indefinite answers. J. O. Edwards stated that at a mill where he worked in 1903, they are still using card clothing put on at that time. Mr. Honeycutt reported some card clothing installed in 1917 still running with good results; Mr. Gurley said he had some 13 or 14 years old still

giving good results. Someone asked whether clothing that old could be successfully re-drawn. The answer was that "you would only get practice in re-drawing."

Mr. Harden brought up a question as to the number of times card clothing should be wound. The question was, "Should clothing be wound on the cylinder one time and left there, or should it be taken off and wound again?" G. E. Moore stated they had some wound on just one time, and that it is in its seventh year of operation, having given good service, without being tight or loose. Mr. Moore stated that he did not recall the temperature at the time the clothing was wound, but that the cylinder was warm. Mr. Rowe asked how long clothing should be left at room atmosphere before being put on, and the answer was "About two or three days."

Mr. Lanier then brought up the question of controlled draft drawing, and Mr. Harden said he had investigated the weight of the product, and that at the beginning the sliver was very light, but when it came out it was very heavy. "We changed the gear on the back two teeth, and it was sufficient to make up for the over-weight." Mr. Parks then brought out the difference between the new type and conventional drawing, stating that the new controlled drawing produces a saving. Mr. Rowe pointed out that provision has been made for a change in the tension. "Mr. Harden might have taken out two teeth, but in other cases these teeth might have to go back in." Mr. Harden pointed out that "if the lap is started up loose, you are going to make a heavy lap for a yard or two. The lap should be started up tight between the lap roll and the calender roll. If this

D. F. LANIER, superintendent, Oxford (N. C.) Cotton Mills, who led the carding discussion at the Raleigh meeting . . . . . .

is done, I don't think there will be any trouble. Controlled draft helps to eliminate pieces."

The next question asked for choices between leather and metallic top rolls. Mr. Rowe's response was that "you can run leather rolls on top, and there is no question about it. The trouble with metallic rolls is in getting a uniform tension from one end to the other." When a vote was taken, it developed that about 60 per cent of those present use metallic top rolls, and the remainder cork or other non-metallic rolls.

Mr. Mullen brought up the subject of one- versus two-process conventional drawing. Mr. Cone reported good success with one-process; better breaking strength with decreased doublings; adding that the roving is liable to be stretched when it is taken from one machine to another. Mr. Miley stated he had made a change from two- to one-process; "with the two-process I had a front roll speed of 400 r.p.m., and with one-process 200 r.p.m. This change helped everything considerably." Mr. Parks brought out that in his mind it is a matter of drafting rather than drawing, stating that the cotton that comes through two-process is less uniform than from one-process; that you get more and longer draft, and in every instance better yarn, from the new type five-roll drawing. Mr. Gilliam reported running one-process at present, with no excessive variation at low speed.

In answer to a question, Mr. Rowe briefly discussed the Saco-Lowell new type of long draft roving, stating that two of these are in operation at Danville, Va. He explained that this machine forms the sliver in a uniform, rectangular manner, instead of its entering the machine in a round form; that when it is rectangular, there is uniformity from the selvage to the center and back again, giving a uniform pressure all the way across. He declared the machine runs with practically no ends down, that piecings are eliminated. "I have seen eight or ten doffs without a piecing," he declared.

Spinning Discussion

T. W. Mullen next conducted the spinning discussion. The first question related to cork rolls. C. S. Tatum said he had not been successful with cork rolls, especially when changing from 6s to 20s and back. Mr. Batton, of Rosemary, stated he is using cork rolls with good results. Mr. Lanier is using cork on all his rolls, and said, "we have been chang-

T. W. MULLEN, superintendent, Rosemary (N. C.) Manufacturing Co., who presided over the spinning discussion at Raleigh . . . . . .

ing from 13s to 19s without any trouble, and are getting good results." On a question as to how fine numbers can be spun with cork rolls, Mr. Rowe said he had spun as high as 120s with good results.

Long draft spinning was next discussed. Mr. Parks said he has long draft, but that it has just been put in, and he could not give much accurate detailed data. He said they first took out the third process of roving, and then the second process, and are not using the one-process roving—with a vastly superior yarn, and a saving in both labor and power.

"How long will it take to pay for long draft on 14s?" was asked. "From 2½ to 3 years," answered Mr. Rowe. "That is, if you have to replace old frames with new ones." On change-over jobs, he said, the return could come in 1 to 1½ years.

Variable speed drive on spinning was next covered. Out of his experience, Mr. Mullen reported with variable speed drive a 7 per cent increase in production. Asked as to the limitation on spindle speeds with the plain bearing spindle, Mr. Rowe stated the limit was about 10,000 r.p.m., the speed being dependent upon the traveler.

There was some discussion as to the relative merits of variable speed drive on warp and on filling. Those answering seemed to feel that at present the warp application is better.

On the subject of high speed warp preparation, in discussing the advantages of a high speed warper, Mr. Harden said the advantage is in the speed; that with a Foster creel and warper he gets 400 yards a minute, whereas on the old style, 50 or 60 yards is the limit. This concluded the meeting, and afterward the members attended the style show and exposition conducted by the textile department of the school. More than 100 students from girls' college in the State participated, modeling costumes made by themselves from fabrics designed and woven at the textile department at Raleigh. First prize was a complete set of flat silver, awarded by Ed. F. Cook, of Cook-Taylor Co., Charlotte and Fall River, as an incentive to promote further use of cottons.

"The Textile Industry Always Migrates Away from Unfair Oppression"

William P. Jacobs, in discussing the "Modern Exodus," presents some rather startling facts resulting from Code and AAA requirements in this industry

THE present problems of the textile industry, and some indisputable history showing that migration of the industry to other locations inevitably follows oppressive restrictions, formed the subject of a splendid discussion presented by William P. Jacobs, secretary-treasurer of the Cotton Manufacturers Association of South Carolina, before the annual convention of the Atlantic Cotton Association in Charleston, S. C., in April. Mr. Jacobs so adequately and forcefully pictured current conditions in the industry, with regard to oppressive tax legislation, foreign competition, and the cotton processing tax, that a liberal extract of his remarks is here presented for the information of the textile reader.

Mr. Jacobs first showed that, starting with Old England, as textile manufacturing has been restricted and oppressed unfairly, it has migrated to fields of greater opportunities. He told how the industry first moved from England to New England, and then how, as tax burdens and other oppressions there became more and more unbearable, it moved Southward, where, eventually, the burden of taxation and other problems followed it. "Here again," he said, "after years of growth and a reasonable degree of prosperity, there has developed that same old sinister demon, who seems to permeate men's hearts and mitigate against progress and success." He showed that, whereas a tax rate per spindle in New England in 1915 of 70 cents was considered high, that the tax rate in South Carolina increased steadily from 43 cents per spindle in 1922 to an all-time high of 76 cents in 1931. Taking up some of the other adverse conditions, he continued, in part:

Wm. P. Jacobs

"High freight rates seem to have a propensity for following the development of industry and helping to shove it along its migratory way. We have just witnessed the absurd announcement of the Interstate Commerce Commission that the carrier will be allowed to increase rates on coal, starch and other commodities, equally with coal to an estimated increase of 15 cents per ton. Such a step merely speeds the parting guest.

"Unreasonable power rates add to the misery and seem to appear just as industry has wished on it more in the form of costs than it can carry.

"I hope against hope, that Washington will awaken to the gravity of the situation and prevent, or at least help, delay the migration of the textile industry to Japan, to China, to Italy, to Germany and to South America. It gives you a gone feeling in the pit of your stomach to hear of the removal of a cotton mill from the United States to Argentine, and yet that is just what you are hearing and will continue to hear within the next ten years, unless steps are quickly taken to prevent it. And that brings me to the next phase of my story.

"A few weeks ago, a famous textile engineer told me that this country is facing a shrinkage in spindles of at least 20 per cent within the next ten years. With this thought in mind, I began to study other fields and wonder where industry will go. There are two definite indices. The wage trend and the spindle record of the past few years. In my study, here is what I found:

DURING THE PERIOD 1925 TO 1934

	High Pt. 1925	High Pt. 1934	Per cent
1. U. S. lost in spindles	37,786,000	30,938,000	18.0 decrease
2. Germany gained in spindles	9,500,000	10,109,000	6.4 increase
3. India gained in spindles...	8,500,000	9,572,000	12.6 increase
4. Italy gained in spindles...	4,771,000	5,487,000	15.0 increase
5. Brazil gained in spindles..	1,950,000	2,702,000	38.6 increase
6. China gained in spindles..	3,350,000	4,680,000	39.7 increase
7. Japan gained in spindles..	5,292,000	9,115,000	74.1 increase

"It should be noted that fully 3,000,000 of the spindles of the U. S. are now inactive.

"And what do the wage tendencies indicate?

"While wages in the U. S. have been for years steadily increased, and the Code jumped textile wages up at one stroke more than 100 per cent, what has been going on in other countries? While we have been kidding ourselves with the superficial prosperity of high standards of living and living costs out of proportion, what have our wise world competitors been doing? Here is the picture:

TREND OF TEXTILE WAGES
1926-1931—before our Code

	1926 Index	1931
Austria	100	1.36
Russia	100	1.25,3
France	100	1.24,4
Czechoslovakia	100	.979
Germany	100	.897
Italy	100	.888
Japan	100	.67

"I haven't the figures on Brazil, but I know in a general way that Brazil and Argentine are in much the same category as Japan.

"How long can we afford to decrease our own cotton crop 43 per cent in 3 years, while India increases 8 per cent. Egypt increases 22 per cent and Brazil increases 68 per cent? After we have given away to the world in the production of cotton and cotton goods, what will we Southerners do for a living?

"If you raise your costs, your world competitor, who is beyond regulation, ultimately beats you in the market. If you restrict your production, this same ever alert competitor will take your place at the wheel and world production will continue merrily on. There is only one solution to this problem in world competition, and that is in a greater production at a lower cost that more consumers may buy, more workers may work and more stockholders may profit, leaving it to personal initiative to produce a greater earning for the individual, who proves through works, not words, that he is deserving. A cruel doctrine? No doubt. But so are all the laws of nature cruel, and no one has ever beaten the laws of nature and of God. Industry always has and always will migrate to fields where industrial conditions are most favorable.

"May I remind you of the day when many of our mills enjoyed a fine patronage in China, in Japan, in India, in Africa, and in South America. That day is past. The steady rise of our costs gradually caused the dwindling of our export business. The codes and the processing tax finished the job. Today we export comparatively nothing. Our alert competitors, Japan, Italy, Germany and others have beaten us completely in world competition. However, that is only

half the story. Our smart competitors are keen enough and brazen enough to take advantage of our fallacious nationalistic program. They are taking foreign tax-free cotton, and in diminishing quantities our own American cotton free of the processing tax. They are making it into cloth and shipping it in increasing quantities back into the United States, over high tariff walls, and still beating us badly in price. The growth of this development is alarming. It constitutes a menace as serious to you as it is to American Mills.

"The imports of textiles from Japan alone have grown as follows:

Square Yds.:	Square Yds.:		Square Yds.:	
1929..4,652,611	January 1934...	30,000	All of	
1930..3,540,360	April 1934.....	537,000	1934 ...10,502,210	
1931..5,783,792	Sept. 1934.....	683,000	Jan. & Feb.	
1932..6,718,041	Nov. 1934.....	900,000	1935 ...24,000,000	
1933..9,869,166	Dec. 1934.....2,210,000			

"This spectacular trend absolutely must not be allowed to continue. Regardless of the purposes of the Secretary of Agriculture, no man should be allowed to ruin the cotton farmer by stifling his domestic customers for the justification of a pet scheme no matter how attractive theoretically it may be.

"Every farmer, every cotton man, every merchant, every professional man, and every worker as well as every manufacturer in the South should vigorously voice his protest against the serious consequences of the factor, which underlies all these recent problems; against the processing tax.

"The processing tax is a serious menace to the farmer for it leads him to expect a bounty free of all encumbrances.

"As a matter of fact the farmer pays a very dear price for his processing tax bounty. The prices for the textile products he and his tenants buy are increased by the price, particularly the heavier, coarser work clothes.

"Furthermore, the tax stifles the textile industry, causes curtailment and a drastic, perhaps permanent decrease in spindle activity and subsequently a decreased market for raw cotton. As the tax comes entirely out of the pockets of the Cotton Textile Industry, it seriously injures the only sure customer which the farmer has for his product.

"Evidence of this effect is found in the following comparative study of the cotton and cotton goods prices:

	Oct. 1 1933		Apr. 1 1934	Oct. 1 1934	Apr. 1 1935	Incr. or Decr.
N. Y. Spot Cotton		9.90	12.20	12.50	11.30	1.40
38½"64x60	5.35	36.11	36.11	37.45	32.10	4.01
39 68x72	4.75	37.41	36.81	38.00	33.25	4.16

"Note that even the processing tax could not hold the price of cotton up in 1935. Also note that while even the reduced price of cotton is down April 1st, 1935 .0140 per lb., that the price of the leading print cloth constructions is down almost as much as the processing tax of 4.2.

"This seems to me to be positive proof of the fact that it is the mill which has actually paid the processing tax. The mill has been utterly unable to pass the load on. It is strictly a tax on manufacturers for the benefit of the farmers without any benefit for farmers or anyone else.

"To give you an idea of the increased cost due to the NRA I would say that exclusive of processing tax, exclusive of the increase in the price of cotton, freight, the basis and other similar items, the cost per pound on the standard print cloth construction 38½ inch 64x60 5.35 including labor, supplies, repairs, power, fuel, property taxes, salaries, village upkeep, welfare and depreciation increased from 11.76 per pound March 4, 1933, to 20 cents July 29, 1933. This directly as the result of the Code alone.

"What would you do if you were a manufacturer of goods that can only sell at a loss and can hardly sell at all, and if before you started to manufacture, you had to tie up a tax of $21.00 per bale? Wouldn't you prefer to liquidate and let someone else do the worrying?

"That is just what the cotton manufacturers would rather do, but they have not. Many mills have kept going, hoping against hope, piling up goods and losses, furnishing employment to thousands who must live. The statistics of the Print Cloth Group representing 50,000 looms show that stocks on hand unsold have increased more than 200 per cent since the introduction of the Code and the application of the processing tax. Our mills have only sold their production two weeks since January.

"Before closing, may I remind you that of all consumers, the processing tax penalizes the poor man most. Set, as it is, upon a poundage basis it is responsible for a much larger percentage of the ultimate price of coarser, heavier goods, than it is of fine goods. It is unfair to the working men. It is unfair to southern mills, because they consume 86 per cent of our domestic cotton.

"Also we should remember that it is causing cotton to permanently lose many of its markets, which were formerly lucrative. The government has persistently refused to fix an adequate compensating tax on rayon, silk, wool, jute, paper, sisal and other competitive products. As a result, the excessive shift away from cotton made products has been tremendous. Many of these markets are lost for good, to you, to the farmer and to the cotton mills.

"For the southeastern farmer, however, the effect is most ironical. The southeastern mills have paid most of the tax. The benefits to farmers have been paid largely to farmers of the Southwest and elsewhere. Note this interesting comparison:

	Cotton Processing Tax Collections To Jan. 1, 1935	Rental & Benefit Payments Made to Cotton Growers To Jan. 1, 1935
South Carolina	$25,278,499.34	$10,395,156.52
Georgia	24,924,219.95	16,085,856.51
North Carolina	35,247,419.69	7,090,603.16
Virginia	3,981,073.60	349,124.29
	$89,431,212.58	$33,920,740.48

"No cooperative effort can permanently succeed, unless it is mutually profitable to all concerned. A tax like this is so manifestly unfair to the farmers, business men, professional men, mill workers and mills of the Southeast, that it cannot and must not last."

Carolina Yarn Association Elects New Officers

At the annual business meeting of the Carolina Yarn Association, held at the Greensboro Country Club, Greensboro, N. C., on Monday, March 25, the following officers were elected: President, Bruce Griffin of Charlotte; vice-president, Henry Stokes of Charlotte; treasurer, J. R. Morton of Greensboro; and secretary, K. C. Loughlin of Charlotte. Mr. Griffin succeeds R. D. Howerton as president. The only officer re-elected was Mr. Morton.

It was voted that the annual golf tournament this year would again be held at Pinehurst, N. C., at a date to be decided by the executive committee. An excellent treasurer's report was submitted. Retiring President Howerton was made chairman of a committee to draw up by-laws to be submitted to the executive committee for approval.

Other business matters pertaining to the functions of the association were discussed and submitted to the executive committee for consideration. This meeting was termed the most successful business meeting since the association was organized, and plans are already in the making to insure a pleasant meeting at the annual golf tournament to be held at Pinehurst in the early fall.

* * *

Move New York Office

The New York offices of both the Cleveland Crane and the Cleveland Tramrail Divisions of the Cleveland Crane & Engineering Company have been moved from 50 Church Street to 60 East 42nd St., New York City.

Publisher's Statement of Circulation

This is to certify that the average circulation per issue of COTTON for the six months' period July 1st to and including December 31st, 1934, was as follows:

Copies sold	8,958
Copies distributed free	1,031
Total	9,989

W. R. C. SMITH PUBLISHING COMPANY.

Signed O. A. SHARPLESS, Treasurer.

Subscribed to and sworn before me on this 19th day of March, 1935.

E. L. PHILPOT,

Notary Public, State at Large.

My commission expires March 7, 1939

Augusta Meeting Clarifies Policies and Refreshes Manufacturers

Addresses score, and resolutions ask for study to broaden base of, the processing tax; fine entertainment program; T. H. Webb made president

IT WAS The Bishop's meeting—and nearly everyone interested was present. The 39th annual convention of the American Cotton Manufacturers Association, held at the Bon Air-Vanderbilt Hotel, Augusta, Ga., on Thursday, Friday and Saturday, April 25, 26, and 27, was a high mark in textile association history, and hung up a record which was in keeping with the significance of the occasion, and provided profit, inspiration and entertainment of the highest order.

Without an audited check of the attendance, it is certainly safe to report that any southern mill without at least one representative was in a decided minority. The subject of merchandising had been heralded as the high point of one session, there was an array of speakers for another session whose points of view on subjects of moment were, along with their reputations for forensic eloquence, sufficiently familiar in the industry, a conspicuous United States Senator was scheduled for an address—and W. D. Anderson, president of the Association, had promised an entertainment "worth coming a thousand miles to enjoy". Every prediction and every promise was fulfilled.

New Officers

Thos. H. Webb, president, Locke Cotton Mills Co., Concord, N. C., was elected as president of the Association for the ensuing year, in the business session which concluded the meeting, succeeding W. D. Anderson, president, Bibb Manufacturing Co., Macon, Ga. (See biographical sketch of Mr. Webb, page 37 this issue.) Donald Comer, president, Avondale Mills, Birmingham, Ala., was made first vice-president, and Robert E. Henry, president, Dunean Mills, Greenville, S. C., was elevated to second vice-president. W. M. McLaurine was re-elected secretary-treasurer. Members named to the board of government were: From North Carolina, C. A. Cannon and K. P. Lewis; from South Carolina, Marshall P. Orr and George M. Wright; from Georgia, R. Hill Freeman; and from Alabama, Allan Little.

In arranging for the convention, President Anderson with characteristic thoroughness, planned a three-day program instead of the customary two-day convention, in the thought of providing ample opportunity for a period of relaxation and enjoyment in addition to a thorough treatment of matters of importance to the industry under prevailing conditions. No delayed report could within the limitations of space capture and transmit in detail the valuable thoughts and information developed in the various features of the program, but this record will review some of the major highlights.

The first session on Thursday morning, which followed an executive meeting of the board of government on Wednesday evening, was the most spectacular of the convention, containing as its high point the masterful address of W. D. Anderson as president, and other timely features. After the preliminaries, Secretary W. M. McLaurine submitted an interesting report on the activities of the organization during the year, reflecting a period of intense and constructive effort and results on behalf of the cotton-textile industry of the South, which the organization represents and serves.

Speech of G. H. Dorr

The next two speakers — Goldthwaite H. Dorr, president of the Cotton-Textile Institute, and George A. Sloan, chairman of the Cotton Textile Code Authority—made brief and constructive addresses pertaining to problems of the industry generally, both touching of course on the current subjects of the processing tax and the import and export situation. The first of these speakers, Mr. Dorr, urged more effective application of the principles of the National Industrial Recovery Act, rather than the abandonment of that Act, as the best means of solving the

W. D. ANDERSON, president of the Bibb Manufacturing Co., retiring president of the American Cotton Manufacturers Association . . .

pressing problems of the cotton-textile industry, including the increasingly important one of low-cost Japanese competition. "When we ask, as we have", said Mr. Dorr, "for measures which will deal with competition of this character in our industry, we ask for the application of a national policy, declared in the Act, and on the faith of which we, as an industry, came forward with the first code. It is not 'whining' to ask that the policy be applied. It is asking that national promises be kept."

The industry, pending governmental action toward solution of problems beyond its control, is redoubling efforts to stimulate demand for its products—which for the first quarter of 1935 was 22 per cent below the corresponding quarter of last year—declared Mr. Dorr, pointing to National Cotton Week (May 6-11) as "but one expression of the ingenuity and effort which the industry is making along that direction".

"Next we are asked—why not stimulate demand by reducing prices?" Mr. Dorr continued. "Well, the drop from prices of 1933 and early 1934 at which the industry was able to make some return on its investment to present prices which involve for the industry generally sales at a loss, has not in fact stimulated demand. Instead it has created a feeling of

uncertainty which retards it. Further, a reduction in price cannot be made out of profits because there are none. Looking to elements of cost the price of raw cotton is beyond our control. Certainly no general reduction of price can be made at the expense of wages.

"There is only one substantial element of cost which can be removed in an effort to increase demand by a lower price. The processing tax amounts to nearly half of the wage bill of the industry. It is an abnormal element of cost. From the start the industry has urged not that the payment of farm benefits be abandoned, but that they be financed by some form of tax that has a normal relation to ability to pay rather than this tax which operates as a sales tax imposed on a necessity of life and falling heaviest on those who have least ability to pay. Such a substitution should help demand".

Referring to the possibility of increasing demand through governmental action in checking the Japanese invasion of domestic markets, Mr. Dorr emphasized that Japanese imports are concentrated along certain lines only and that to compare their volume with the whole range of domestic production is "illusory". Asking for reassurance for the industry in its present distressed condition, he continued:

"The effect of Japanese competition, therefore, isn't merely the silencing of spindles and looms by the loss of volume. For Japanese imports to come in and be offered, as they are, at figures markedly below our cost of production tends, in the range of articles with which they compete, to hold down

DONALD COMER, president, Avondale Mills, Birmingham, Ala., the new first vice-president of A. C. M. A.

prices for our domestic product at destructive levels, puts a downward pressure on wages, impairs capital, prevents progress and improvements, and creates a fear of further invasion and of closing down of plants . . . At present there is the fear, not unreasonable, that what has happened in bleached goods may happen in almost any branch of the industry."

Mr. Dorr appealed for action by Washington to regain for the industry its former markets in those countries—notably the Philippines—where we enjoy special governmental and economic relationships. A possible solution of the export problem may be found, Mr. Dorr suggested, in a plan now before the administration for making available to cotton manufacturers a part of the raw cotton now held by the government, on terms that will make it possible to export it in manufactured form.

Turning from demand to the other side of the competitive equation—supply—Mr. Dorr recalled measures adopted by the government during the war to deal with under-capacity. "We have had the reverse of that in the great depression", he said. "There the great temporary over-supply of facilities, the great over-supply of labor, the one-sided competition among those who had their services and commodities to sell, forced down prices of commodities and prices of labor to levels which seemed to have no bottom. In an effort to deal with this situation we had the NRA. In our own code we endeavored by minimum wage provisions to put a floor below which wages should not be forced down. We endeavored to check the effects of over-capacity by reducing the permissible operation of the equipment in our industry from 24 hours a day all the week to two forty-hour shifts, and to provide for certain further limitations where capacity still unduly exceeded effective demand. We had a reasonably good year. With the falling off in demand and with delay in applying flexible limitations, we are back again in a serious situation.

"It is clear that we still have much to learn in dealing with our over-capacity, and in adjusting our production to what the market will absorb at fair competitive prices. That problem has got to be solved if we are going to have a normal healthy industry. Shall we abandon the effort, throw open the way to further over-capacity by permitting the operation of the equipment of the industry 24 hours a day, and trust that wholesale bankruptcy will effect a cure for our difficulties, though it never has in this or similar industries, here or abroad? Or shall we approach with determination the problem of improving and perfecting our technique of adjusting our production to effective demand and eliminating surplus capacity?

"There are two things in this technique which need to be dealt with. First, the actual orderly removal from the industry of equipment which is in fact surplus. Second, the application of temporary flexible measures properly *timed* to deal with the results of overcapacity promptly enough and completely enough to effect results, and not merely taking measures for locking the stable door after the horse is gone."

Efforts along this line can be made to work, concluded Mr. Dorr. "They are being made to work in other countries. To abandon them now would mean to make up our mind to the perpetuation of a situation such as that from 1926 to 1933 in which the industry as a whole not only made no return on its investment, but sustained a loss of $130,000,000."

Sloan's Remarks

George A. Sloan spoke next, stating that "cotton manufacturers from Maine to Texas are gratified that the President has ordered an immediate investigation of imports into this country of cotton bleached goods. The tariff commission will find that imports of these fabrics from Japan have been greater during the past three months than in the previous 103 months combined. This is attributable to only one reason. Mill efficiency or the lack of it has nothing to do with the import problem. Ingenuity matters not. We have in America many of the finest, best-equipped and best-managed cotton mills in the world. Ten million spindles have been scrapped in the United States since 1925. Three million new spindles have been installed. The rate of modernization has been greatly accelerated under the code. I am confident that the last two years have been the best in this respect since 1927. More can and will be accomplished on mill modernization with improved financial ability and restoration of confidence in the future of the industry. But even the most efficient, lowest-cost American mill hasn't a Chinaman's chance in meeting this type of import competition if it continues unchecked.

"The sole cause of this influx in bleached goods imports into America is the same which has succeeded in practically annihilating our exports of cotton yarn and cloth to the Philippines and to Cuba. It is the wage rate paid to Japanese textile workers, which according to reports submitted to the U. S. Department of Commerce, approximates 23½ cents a day. Japanese wages are Japan's concern, not ours. But if we are to promote recovery in this country, and at

the same time, maintain American standards of living, it is this government's concern and responsibility to vigorously protect NRA hours and wages from low-wage, foreign competition.

"In the six months prior to the adoption of the cotton textile code, the average labor cost for processing one pound of cotton was 5.85 cents. During the first six months of 1934, the labor cost was 10.5 cents. Coming on top of these increased labor costs under the code, the cotton processing tax of 4.2 cents threw the price of cotton textiles altogether out of line with commodities generally. For 20 months the amount due the government on cotton processing taxes approximated $185,000,000—a huge sales tax on a basic necessity of life and falling the heaviest on those least able to pay.

"This industry is not unsympathetic with the government's underlying purpose. The farmer must have relief. But relief for the cotton farmer is a national problem and there is a growing feeling in this country, as reflected in the Congress, that it is altogether unreasonable to concentrate the weight of this burden upon one industry and the customers of that industry . . . During the past eight months, 71 cotton mills, normally employing 20,800 workers, have been obliged to close down and cease operations. This industry, North and South, is of one belief that (1) fair and immediate protection from low-wage foreign competition, (2) complete removal of the cotton processing tax, and (3) the restoration of our legitimate export markets to the Philippines and to Cuba would greatly increase the consumption of American cotton and go a long way toward reviving this industry and providing jobs for many thousands now unemployed."

GEORGE A. SLOAN, chairman of the Cotton Textile Code Authority, who spoke at the Augusta meeting

Mr. Sloan next devoted a portion of his talk to answering charges of Secretary Wallace in connection with the stand of the textile industry regarding the processing tax, and to showing, in answer to other criticisms, that there has been in the textile industry an overwhelming compliance with the wage and hour provisions of its code.

Frank P. Douglas, member of the Textile Labor Relations Board, Washington, followed Mr. Sloan. Colonel Douglas, speaking without manuscript, and intentionally avoiding reference to specific details of the board's work in connection with labor problems arising under the code, charmed his audience with his personality and evident sincerity.

Address of President Anderson

The high spot of the session, and one of the outstanding features of the meeting, was the address of Wm. D. Anderson, as president, which followed the appearance of Colonel Douglas and concluded the morning meeting. Characterized by almost unanimous approval by those attending the convention as a masterpiece of bold, courageous statement of defense and offense on behalf of his industry, and presented by The Bishop in his unexcelled forensic eloquence and forcefulness, it was called by all one of the greatest addresses in textile history. No abstract of it would suffice. Printed copies of the complete speech are available in pamphlet form at the office of American Cotton Manufacturers Association, First National Bank Building, Charlotte, N. C., and everyone interested in cotton-textile manufacturing is urged to secure there a complete copy of this great document.

The first portion of Mr. Anderson's address started with the statement that "The most disconcerting force that has embarrassed men who are struggling with serious business problems has been the consistent and persistent poisoning of the wells of public opinion" by muck-rakers, inquisitionists, reformers, mongrel statesmen, etc., whose prosperity could not exist "unless the wells of public opinion were kept virulently poisoned". He took up some of "this poisoning of the wells of public opinion", and effectively answered each. He answered the charge that two per cent of the people own or take 80 per cent of the national income by showing that approximately 60 per cent of the population are children and dependent on no recorded income. "It would probably be a truer statement to say that 60 per cent of those who do not share the national income receive approximately 80 per cent of the whole". He showed in answer to other charges that the worker's share of the national income has grown from 38 per cent in 1850 to 65 per cent in 1929 and has remained at that level during the depression; that corporation profits between 1922 and 1929 in no year exceeded 4.8 per cent; while real wages (money wages related to living costs) increased 16.8 per cent during the same period; moreover, employees are receiving a larger income in payment for fewer hours work.

As to a charge that manufactured goods prices are constantly on the increase, the speaker showed that during the boom years 1922 to 1929, prices of manufactured products declined 9.2 per cent, while reducing hours of labor and greatly increasing the wages of workers.

On the charge that improved machinery has made necessary arbitrary limitation of hours of work if millions are to be re-employed, Mr. Anderson showed that the census of 1930 reports 39.8 per cent of our population gainfully employed, as against 34.7 per cent in 1880. "More than half the visitors to the Century of Progress in 1933 were dependent on incomes from industries that were not in existence at the time of the Chicago World's Fair in 1893", he said.

Quotes Loper's Report on Textile Wages

Turning directly to the textile industry, Mr. Anderson first answered charges that "the textile industry is keeping its employees in a state of peonage and servitude", and that the so-called "stretch-out" is an inhuman unparalleled exploitation of workers. He showed that since NRA hourly wages in the cotton mills have increased over 70 per cent, that hours of labor have been reduced from an average of 54 per week to 40 per week; that over 100,000 additional workers have come into the mills since March 1933. "The textile workers of the nation are in better shape today than they have ever been in, and, left to themselves, are happier and more contented than ever before". He briefly referred to the statement of J. E. Sirrine as to the "stretch-out", showing that it is but a division of work between the skilled and unskilled, and that "no practices can be found in the textile industry in connection with speeding up work that are comparable to practices in other industries, which have so far been exempt from criticism."

Mr. Anderson next answered, with interesting figures, the charge that the textile industry is a low wage industry, declaring first that work in textile mills is not sufficiently skilled for the wages to be fairly compared with the wages of skilled workers in other

trades which require long periods of apprenticeship and frequently technical training. Also that the textile industry offers more regular employment to all the workers on its payrolls than do most industries with which it is compared. He quoted from a study just completed by Ralph E. Loper of textile wages in 50 mill villages in the South, and of the wages and income of workers in other lines of work in these communities. Mr. Loper's report showed that the average wage of all operatives, including those exempt from the minimum wage provisions of the code, was $14.34 for 40 hours; whereas the comparable rate for less skilled workers such as clerks in chain stores and grocery stores was $11.44 per week for an average of 47.4 hours.

Investigation on the more skilled jobs in the 50 mills studied showed an unweighted average of $16.59 per 40-hour week for speeder frame tenders, warp drawing girls, weavers on plain and fancy work, against an unweighted average of $15.16 per week for stenographers, telephone operators and saleswomen in stores. Adding 5 per cent for vacations with pay, granted in some cases, the equivalent wage for these classes is raised to $15.92 compared with $16.59 for the more skilled women workers in the textile industry. Mr. Loper found that the equivalent wage for grade school teachers was $15.17 per week.

Turning to the male textile workers of the more skilled groups, Mr. Loper found an unweighted average of $18.79 per 40-hour week for such employees as card grinders, slasher tenders, weavers, and loom fixers. This compares with an unweighted average of $31.00 per week for carpenters, plasterers and plumbers. However, in the judgment of many contractors interviewed, these trades given an average employment of only 23.3 weeks per year, indicating an average yearly earning of $815.00. Deducting the 25 per cent curtailment applying to textiles for a period of 12 weeks in 1934, the average yearly income of the more skilled textile workers amounted to $864.00 compared with $815 for the carpenters, plasterers and plumbers.

These comparisons, it was pointed out, do not take into account that "these other workers are required to pay higher costs for rent, lights and water and usually have higher expenses for clothing and other necessities than do the textile workers with whom they are compared."

The charge of flagrant violations of the wage and hour provisions of the code were answered by a quotation from the report of the Department of Labor in Washington, showing a 98½ per cent compliance with the provisions of the code.

Blasts Wage Differential Charges

Recent charges by New England mills that the $1.00 per week differential in the code gives the southern textile mill an advantage over its eastern competitor were disposed of by figures from Mr. Loper's study showing that the total value of the houses and facilities in the 50 villages studied was $34,203,736, from which he arrived at the cost to the mill for the operation of the village, figuring 6 per cent interest and depreciation. On this basis he found that the net cost to the mill per week per worker housed was $1.946 and that the net cost to the mill per worker employed in the mill, taking into account those who did not live in these villages, was $1.351. The study also showed that the average rent paid per room for these houses, including lights and water, is 33 cents; the average cost to workers living in these villages for fuel is 9.2 per room per week.

Since it is the usual thing for the southern textile mill to provide housing for the great majority of its workers, and in the East it is the usual thing for textile workers to live in houses privately owned or rented for profit to the owner, it would be necessary to add to the southern wage, in making comparisons, either $1.946 or $1.351 per week as a wage equivalent. In addition, Mr. Loper made a study in 8 New England mill centers, which disclosed that the textile worker in New England pays for rent, water, lights and heat per room per week an average cost of $1.029 against 42.2 cents cost to his brother textile worker in the South.

Mr. Anderson also answered the frequent criticism of the mill village system, declaring that if it is paternalistic and feudalistic for the mill owner to provide schools, hospitalization, public health service, free medical clinics, public nursing, playgrounds, etc., then it is equally paternalistic and feudalistic for other municipalities to provide these facilities for their citizens out of tax money. He concluded this portion of his address by stating that "Some thoughtless reformers have gone so far as to insist that the southern mill owner should sell the houses in his village to his workers. From the standpoint of economics, the mill owner would be delighted to do this, but there are two things that prevent. One is that the mill workers would not care to own the homes and would not buy them, and the other is the duty and responsibility of the mill owner to protect the citizens of the village. In any campaign started in the South to sell the houses in the mill villages, the first three pieces of property that would be sold would be one for a blind tiger, another for a bawdy house, and another for a center for labor agitation. Unfortunately, it is an impossible proposition."

W. M. McLAURINE, secretary-treasurer, American Cotton Manufacturers Association, who was re-elected to this office . . . . .

Answer to Wallace

Mr. Anderson next devoted a portion of his time to a forceful chastisement of Secretary of Agriculture Wallace for his attitude in connection with the processing tax and the efforts of the industry to have the responsibility of paying in its entirety this "super-sales tax" removed from the neck of the textile industry and its customers. Reviewing the inconsistent attitude which Mr. Wallace has taken, Mr. Anderson said, "I cannot escape the conclusion that the sober thinking elements in this country have reached the decision that Mr. Wallace has demonstrated his incapacity to preside over the Department of Agriculture . . . Mr. Wallace ought to resign his post, take Professor Tugwell with him, and start a farm paper somewhere . . . We need a big strong man, with plenty of horse sense, in charge of a department that is spending as much money as the agricultural department is spending today and which has such a tight grip on the destinies of the American farmer as that department has under existing laws. By 'horse sense' I mean the type of sense that a horse is supposed to have and which a jackass hasn't got." Mr. Anderson emphasized that "our industry is not objecting to payments to the farmer in such amounts as are needed to make his situation equal with that of other citizens in this country. Our contention is that in raising the money for these benefits by levying them on the processing of cotton, wheat, corn and hogs, a gigantic sales tax of from

15 to 25 per cent is being levied on the meat, bread, and clothes of the people. This is an unreasonable levy on the necessities of life, and the base of the tax should be broadened."

Address of Senator Tydings

The afternoon session of Thursday was featured by an address by Hon. Millard E. Tydings, U. S. Senator from Maryland, who was introduced by O. Max Gardner, and who measured up to flattering introduction by a remarkable speech discussing world economic conditions with particular reference to cotton growing and marketing and cotton-textile manufacturing.

Before the World War, the Senator pointed out, the United States was a debtor nation, and also an exporting nation, but that since the war, while remaining an exporting country, selling to the world more than we buy from the world, we have become the greatest creditor nation in the world. He reviewed the upheaval in world relations which this change has occasioned, discussed the influence of war debts, and emphasized that in the face of increasing ultra-nationalism, a broader internationalistic view must be taken. As to cotton, he said, in part: "We normally export more than half of our crop. Whatever may be said about the non-importance of our foreign trade, as to other commodities, foreign trade is the very life blood of cotton production in this country . . . Heretofore tariff acts have been passed by the Congress, the rates of which have applied equally to all countries. The rates upon importations of cotton cloth coming from Great Britain have been the same rates which have applied upon cotton imports coming from Japan notwithstanding that the cost of production in Japan is less than the cost of production in Great Britain . . . It may be that in clearing up the debris resulting from the World War that the United States in the future will have to have varying rates of duty to meet the different conditions in each of her competitor countries. Unless this is done, at least to a degree, we will transfer our commerce, particularly in cotton, from Europe to Asia and lose the richest market in the world outside of our own .

"The United States cannot compete in the cotton markets of the world unless its people can produce both raw and manufactured cotton at a price which will permit us to sell the product in competition with foreign countries which produce it.

"While the production of raw cotton in the United States has steadily declined 40 per cent during each of the past four years, the production of cotton in foreign countries has steadily increased 30 per cent during these same years. The United States, which formerly produced more than half of the cotton produced in the world, last year and the coming year for the first time in its history will produce less than half of the cotton produced in the world . . . What has been done to assist the cotton production industry in the recent two years may have been justified as a necessary temporary expedient. It can never be justified as a permanent policy of the United States for the present policy but writes its own doom the longer it continues, and it will plunge the cotton farmer into a dark abyss of despair, darker and deeper than any he has known up to now . . .

"Cotton farmers must decide whether or not they prefer to receive temporarily an increased price per pound for producing less cotton with an increasing reduction in our foreign and domestic markets for cotton or whether or not they wish to hold these foreign markets by producing cotton so that it can be sold in competition with other world producers. They must think not only for the present but for the future. They must think not only for themselves but for their children and their children's children. Any other policy as to cotton is penny wise and pound foolish. The same problem is presented to the cotton textile manufacturers and must be thought out in the same manner."

Roosevelt's Secretary in Augusta

MARVIN H. McIntyre, assistant secretary to President Franklin D. Roosevelt, was in Augusta during the sessions of the American Cotton Manufacturers Association. He attended a portion of the banquet program on Friday evening. It was reported that Mr. MacIntyre visited Augusta at the direction of his chief, following a conference by Mr. Roosevelt with Charles A. Cannon. While in Augusta, Mr. MacIntyre played considerable golf with Bobby Jones, and chatted informally with individual members of the manufacturers' organization in the lobbies and rooms of the hotel. He did not commit himself other than to say that his visit was a purely informal one and that he came "to do a lot of listening and no talking."

Style Show and Presentation of Gifts to Southern Code Authority Members

On Thursday evening, following an informal dinner, an elaborate and impressive style show featuring the latest models in cotton was held, under the direction of Miss Catherine E. Cleveland, stylist for the Cotton-Textile Institute. The manikins were members of the Augusta Junior League. After the style show in the nature of a surprise arranged by Secretary W. M. McLaurine, the ten southern members of the Cotton Textile Code Authority were each presented a beautiful silver bowl, as an expression of appreciation from the American Cotton Manufacturers for the work of these men in behalf of the southern textile industry. George M. Wright, of Great Falls, S. C., made the presentation in a thoroughly effective manner.

Then, following a moving picture presentation, dancing was enjoyed in the ball room until a late hour.

Friday Session on Merchandising

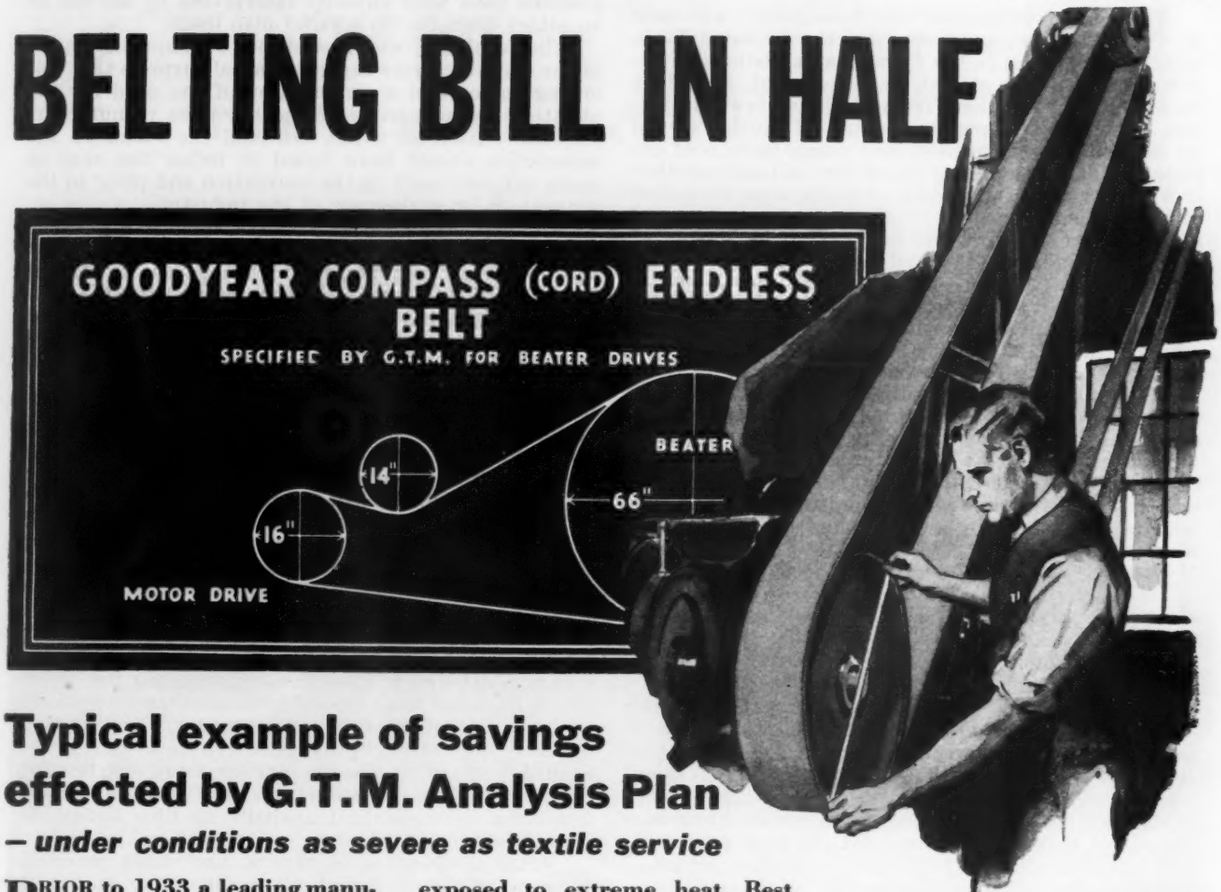
The Friday morning session was designated as a merchandising symposium. Directed by President Anderson, the program included addresses from five representatives of as many elements in textile goods distribution, starting with Saul F. Dribben, vice-president, Cone Export & Commission Co., New York City, who discussed the point of view of the selling or commission house; followed by Flint Garrison, chairman of the Wholesale Code Authority, who discussed the wholesaler's part in the distribution picture; Arthur Fluegelman, of N. Fluegelman & Co., New York, who discussed converting; Worth Howard, manager, New York Office, Donnelly Garment Co., who covered the garment manufacturer and cutter-up; and David Ovens, president, National Retail Dry Goods Association, who spoke for the retailer.

Each speaker presented a convincing statement of the part occupied by his respective branch in the field of distribution, and the composite picture covered the subject of merchandising in a manner of value and interest to the cotton manufacturers whose weakness, as Mr. Anderson pointed out, has been and is in their merchandising rather than manufacturing. A better understanding of each phase in the scheme of distribution was secured by those attending this symposium.

Executive Session Friday Afternon

Subsequent to the preparation of the original program, President Anderson scheduled an executive session for cotton manufacturers only on Friday afternoon, at which, it was announced Saturday morning by Mr. Anderson, O. Max Gardner, counsel for

IN ONE YEAR HE CUT THEIR BELTING BILL IN HALF



Typical example of savings effected by G.T.M. Analysis Plan

— under conditions as severe as textile service

PRIOR to 1933 a leading manufacturer of paper containers was plagued with belt trouble. On some drives belts were giving only a few weeks' service; six months was exceptional on others.

Then the G. T. M.—Goodyear Technical Man—entered the picture. This practical expert made a detailed study of operating conditions—analyzed every drive—and finally recommended a complete belting program.

Here are the records of some of the severest drives in the plant since the adoption of the G. T. M. plan.

Not one service failure

Hot Air Fan on paper machine. A difficult high speed drive, exposed to extreme heat. Best previous belt gave six weeks' service. G. T. M.-specified Goodyear COMPASS Belt has given 2 years' continuous service—and the motor has never been taken up!

Helper Drive on paper machine. Adverse heat and water conditions. Previous belts lasted 5 to 6 months. Goodyear COMPASS Belt still going strong after full year's service.

Agitator Drive. Previous belts broke down every three weeks. Goodyear COMPASS has given 18 months' trouble-free service.

Whipper Drive—runs in water continuously. Former belts lasted 3 days to a week. Goodyear COMPASS in service 18 months.

Production UP—Costs DOWN

As a result of this exceptional service, the company reports that although their production was greater, their belting costs were reduced 50% the first year under the G. T. M. plan.

The G. T. M. is ready to make a similar money-saving analysis for you—to specify *service-proved* Goodyear products to your individual operating requirements. To consult him, write Goodyear, Akron, O., or Los Angeles, Calif.—or the nearest Goodyear Mechanical Rubber Goods Distributor.

BELTS · MOLDED GOODS
HOSE · PACKING
MADE BY THE MAKERS OF GOODYEAR TIRES

THE GREATEST NAME IN RUBBER

GOODYEAR

the industry in Washington, made his report. The press was excluded from this session so no report is possible.

The Bishop's Entertainment Friday Evening

The annual banquet of the Association was held on Friday evening, and provided the occasion for a delightful surprise in the form of an elaborate entertainment program staged by friends of President Anderson, most of them from his home town of Macon, Ga. This program consisted of music, served up in a variety of forms to suit every taste, and entertainment of a minstrel character—all put together in a smoothly-operated show utilizing some 25 fellow townsmen and friends of Colonel Anderson, and staged under the direction of Dr. Holmes Mason, of Macon. Dancing in the ball room followed this entertainment.

The Saturday morning session, which concluded the meeting, drew an unprecedented attendance; whereas in the past many members considered this as a routine affair for transaction of routine business, many were present this year in view of an expected resolution concerning the processing tax, etc. The meeting was opened by President Anderson who called upon R. E. Henry for a report of the policy committee, Carl R. Cunningham, traffic manager, who reported for the traffic committee, S. M. Beattie, who reported for the cotton committee, and Stuart W. Cramer, reporting on the Textile Foundation and National Industrial Conference Board.

The report of the committee on resolutions was next read, this report being presented by Charles A. Cannon, a member of the committee, vice Donald Comer, chairman, who had returned home on the previous evening.

The first resolution read pertained to the processing tax, the paramount subject of discussion in the industry during recent months. Instead of advocating its removal, in line with the addresses of President Anderson, and others, the resolution mildly stated that, since the tax is now borne by cotton processors alone, and that since during 1934 the mills spun 800,000 bales less than in 1933 and is now in a period of forced curtailment and increasing inventories—"because of this background and because of the common interest of the grower and spinner, we are continuing to urge that cotton alone should not have to carry the full burden but that these needed funds should come from some broader tax base.

"Our suggested changes have never contemplated the giving up of the one tax plan until another and better one has been accepted. We regret that our suggestions have been unjustly interpreted by anyone as an attack upon the farm relief plan itself."

The resolution was passed, but subsequently many of the manufacturers expressed awed surprise that following so forceful a presentation of the need for the abolition of the burden of the tax upon manufacturers, the resolution which reflected the stand of the association should have failed to follow the case as made out previously in the convention and prior to the convention by spokesmen of the industry.

Another resolution which, like all others presented, was carried, requested continuance of the 12-cent loan on cotton, and immediate announcement of that fact. Another deplored, in connection with the controversy over the $1.00 weekly differential in the minimum wage between the North and South, "the efforts being made to use the present distress affecting the entire cotton textile industry as the means of sectional disturbance and political agitation. "Tremendous concern" over an increase of over 30,000 per cent in imports from Japan in January 1935 over the same month last year. The President was offered the association's full facilities in studying this situation and taking corrective measures. The Department of Agriculture was asked to consider a plan of manufacturing some of the government's extensive cotton holdings into clothing. The FERA was asked to use a part of the works relief fund to provide cotton goods for those on relief. An adequate tariff on jute and jute products, and means for providing that cotton be sold on a net weight basis thus encouraging the use of cotton bagging, were the subjects of other resolutions.

Luther H. Hodges, general manager, Carolina Cotton & Woolen Mills, Spray, N. C., spoke briefly at the Saturday morning session urging more interest on the part of cotton manufacturers in the conference on industrial relations held annually at Blue Ridge, N. C., by the Y. M. C. A.

After the election of officers, previously reported, the new president, Mr. Webb, assumed the chair. B. B. Gossett presented to Retiring President W. D. Anderson the president's medal of the association; the meeting was then adjourned.

M. I. T. Textile Courses

Textile microscopy, textile technical analysis, and textile laboratory are the special summer courses being offered again this year by the Massachusetts Institute of Technology under the direction of Professor E. R. Schwarz. The work begins on July 24 and continues for six weeks ending on September 4.

Textile microscopy consists of 30 lectures and 45 hours of laboratory. The lectures will be given at 10:15 each week day except Saturday and the laboratory will be offered from 1:00 to 3:30 on Monday, Wednesday, and Friday afternoons.

Textile technical analysis consists of 30 lectures given on each week day morning with the exception of Saturday from 9:15 to 10:15 and will cover the technique of the physical testing of textiles (exclusive of optical methods) and will also include discussion of methods of report writing, precision of measurements, graphical interpretation of data and the elements of fabric and yarn structure.

Textile Laboratory may be devoted to work in textile technical analysis, to work in textile microscopy or both and is offered to fill a 15 hour per week schedule, arranged to suit the convenience of the student. Registration for the laboratory work is strictly limited and an early application is necessary to ensure membership in the group.

Excellent living facilities are available at very moderate cost in the new dormitory group. Reservations may be made at any time.

* * *

Wood Now Adv. Mgr. for American Bemberg

Appointment of Theodore Wood to succeed Ernest C. Morse as advertising manager in charge of promotion for American Bemberg Corporation is announced by Dr. W. Schlie, sales manager of the company. Mr. Morse who has been with the company for the past six years, has resigned to join the Associated Wool Industries as general director.

Mr. Wood, who has been connected with North American Rayon Corporation for the past year was for seven years previous president of Wood VanderPyl company, cotton goods commission agents. Prior to this he was for ten years director of sales for the Connecticut Mills and Canadian Connecticut Cotton Mills, Ltd. He was also identified with the Goodyear Tire & Rubber Company and The American Yarn Company.

Mr. Wood will take over his new duties with American Bemberg Corporation immediately, and will be assisted by H. Z. Heuston.

THE COT

THAT'S MADE IN

just one grade

EVERY Armstrong's Seamless Cork Cot is exactly like every other one. There's only one *grade!* And here's why!

The manufacture of these cots is *carefully controlled:* the same ingredients are used in the same proportion every time! There's no guesswork—no chance for the variations that occur in unfabricated products of nature.

This complete *uniformity* of Armstrong's Seamless Cork Cots means important advantages for you! It assures uniformity in drafting . . . stronger and evener yarn . . . the almost complete elimination of hard ends and fewer end downs.

In addition, mills operating "on cork" report *savings* of from 50% to 75% on roll covering costs. For full information on Armstrong's Seamless Cork Cots, write Armstrong Cork Products Company, Textile Division, 923 Arch Street, Lancaster, Pennsylvania.

A Helpful Step Toward Making the Picker Stick Fit the Picker

A CONSTRUCTIVE service for weaving mills has resulted from a recent study of loom loop pickers and picker sticks made by the Graton & Knight Company research organization in their laboratories and in mills, which brought to light some interesting and valuable facts on the effect of a variation of picker stick sizes on cost of loom operation.

When the material for the tests was being collected from various mills, it was noted that there exists a wide variation in picker stick sizes—even in sticks which were supposed to be the same size. In fact, 30 different sizes were found in sticks from as many mills, and a dozen variations of the nominal size in any one mill.

Since all pickers are made to accurately fit a definite size of stick, it is obvious that pickers of the same size cannot possibly fit all sticks with any degree of accuracy. What is the result? If the stick is too small for the picker, as shown herewith in Fig. 1, the picker will be too loose. Even though it is shimmed up, it will not be as accurately centered nor retain its position as it must for most economical operation. This is especially true when the stick is not thick enough, and there is marked looseness at the sides of the loop. When installed on the loom, it is found after an unusually short run that the loose picker moves to one side or the other, and with each blow of the shuttle, the picker is forced to take the impact at one side. Upon continued operation, the head ruptures at the side in a much shorter time than the normal average life of a picker.

Although this accounted for most of the premature failures of pickers applied to sticks that were too small, others failed at the loop. In such cases, the loom had to be shut down in order to realign the picker, and the screw used to hold it in place moved to another position in the side of the loop. In many cases, three screw holes were made in the loop and the leather so badly weakened that it broke between the holes. Shortly after, the break tore through to the edge of the loop, and the picker's usefulness was at an end.

The other extreme is that of a picker forced on a stick too large for the picker; see Fig. 2. It will be noticed that the shape of the loop is very badly distorted. The loop bulges badly on one side and the face of the picker is not parallel with the front side of the stick. Naturally, the fibers of the leather have been so greatly strained that the loop is weakened even before operation is begun. In fact, in some cases, cracks appeared on the surface of the leather in the loop—a definite indication that the strength of the loop was seriously impaired. Also, the face of the picker is put out of alignment with the lay so that each blow of the shuttle drives it farther out of position and shatters it long before it would break down if accurately fitted to a stick of correct size.

What happens when a stick is too small or too large can and does happen when the picker stick is warped out of shape or the front and back are not cut at right angles to the sides.

Now, let us consider a picker stick that is made of the correct size and shape so that the picker may be properly fitted to it. (See Fig. 3.) The loop "gives" just enough to make a permanent tight fit when the picker is driven into position on the stick. There is no looseness to let it slide to one side or the other—the loop is not strained beyond the natural elasticity of the leather. The picker maintains its position constantly at right angles to the lay. Every blow of the shuttle is received at the right point to insure the longest trouble free service consistent with the type of leather used and the construction of the picker.

When consideration is given to these facts, it is obvious that care in applying pickers to sticks of the correct size is a factor which can aid in reducing weaving costs. It will minimize shutdowns and consequent loss of production time due to picker failures and reduce picker cost.

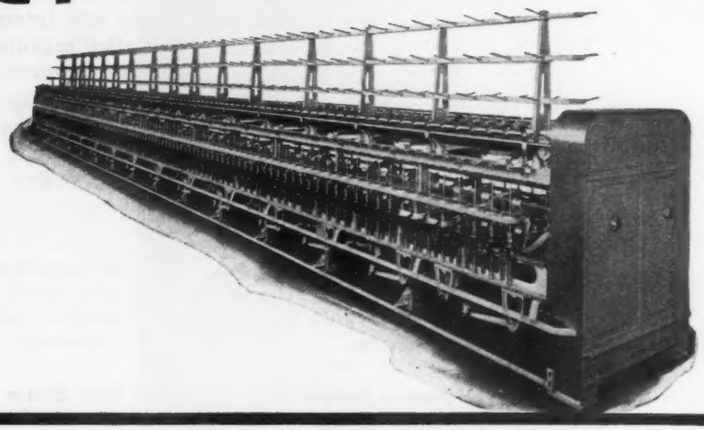
To help mills eliminate this cause of increased loom operating cost and enable them to obtain the most economical service from pickers, research engineers of Graton & Knight Co., Worcester, Mass., have

FIG. 1,
Showing effect when picker stick is too loose . . . .

FIG. 2,
Showing effect when picker stick is too large . .

FIG. 3,
Showing picker stick correctly fitted to picker .

Making Lower Twisting Costs a FACT instead of a Theory . . .



FEATURES

Increase in ring diameter up to 50 percent and more.

Traverses increased as much as 5 inches over old standards.

Spindles designed for high speeds and heavy loads.

Pull of yarn from creel is free, easy and unobstructed.

Gearing permits a wide range of twist.

Reversible tape drive. New design Tension Device allows proper tension on tape, so as to insure steady spindle speed without causing undue strain on the spindle bolster.

Frame is sturdily built and properly balanced throughout to minimize vibration.

THE theoretical advantages of large package twisting are well known: increased production and reduced twisting cost due to fewer doffs; costs in subsequent processing also should be reduced because of the larger supply, fewer knots and the possible elimination of rewinding.

However, these advantages have been largely nullified in the past, because of the fact that, as the size of the ring was increased, it was found necessary to make a corresponding decrease in the speed of the spindle, thus cutting down production.

H & B Large Package Twisting is offered to the trade with the assurance that the necessity of reducing the spindle speed has been eliminated in almost every case. For example the diameter of H & B rings has, in many instances, been increased as much as 50 percent and more without any decrease whatever in spindle speed, and in many cases it has been possible to actually increase the speed of the spindle.

This important advance in twisting is due to numerous factors, including proper clearance and even tension of the yarn in the creel, correct angle of pull from the feed rollers, and proper design of spindle and drive (positive, minimum slippage of tape, etc.). A very important factor is the size and design of the ring for each particular job, in combination with a properly balanced traveler, which at the same time allows for longer traveler life.

The knowledge on which this progress is based is not something that can be duplicated overnight. It has been gained by many months of painstaking experiments and its value to you can be many times the price that you pay for the new H & B Twisters.

Tell us your twisting problem and we will tell what we can do for you. No obligations of course.

H & B AMERICAN MACHINE COMPANY

Cotton Preparatory and Spinning Machinery

PAWTUCKET, RHODE ISLAND

BOSTON OFFICE ● 161 Devonshire St. ATLANTA OFFICE ● 815 Citizens & Southern Natl. Bank Bldg.

H&B LARGE PACKAGE TWISTER

One of the gauges designed to insure correct fitting picker sticks

designed and adopted two new standard sized picker loops; one is 1x19/32 inch, which is correct for sticks for Model X looms, the other is 7/8x19/32 inch, for Model E looms. These engineers have designed, and the company furnishes gratis, small metal gauges with which to gauge picker sticks to determine whether they are of the right size. Sticks of the correct size will fit the correct gauge snugly at the shuttle point when the gauge is at right angles to the face of the stick. Several hundred of these gauges were given to visitors at the recent Greenville Textile Show, and will be furnished to any mill interested. Loom manufacturers and picker stick manufacturers interviewed at the exposition were unanimous in endorsing this step toward standardization looking to more economical operation, and in congratulating Graton & Knight engineers in the development of the plan.

Victor H. Berman Honored at Testimonial Dinner

More than 500 social, political and business friends gathered recently at the Jersey City Elks Club to tender a great testimonial dinner to Victor H. Berman, president and founder of the Onyx Oil & Chemical Co., Jersey City, N. J., in honor of his inductance into office as a member of the Palisade Interstate Park Commission. A distinguished group, including Governor Harold G. Hoffman, of New Jersey, paid tribute to Mr. Berman's character and accomplishments in business, social and civic work. His many philanthropies and his active work in behalf of underprivileged youths of Jersey City were lauded by speakers and guests at the affair. The high spot of the evening was the formal presentation of the certificates of office, signed by Governor Hoffman of New Jersey and Governor Lehman of New York. Mrs. Berman made the presentation of a diamond studded gold badge of office. The officers and employees of the Onyx Oil & Chemical Co. surprised Mr. Berman with a gift of a magnificent onyx desk set and bronze statue in commemoration of the event. Representatives of practically every silk and rayon dyeing firm in the industry were among those present.

* * *

Dupont Expands in Argentina

E. I. duPont deNemours & Company have announced the intention of further expansion of their activities in Argentina. With their associates in Argentina and a French group, represented by the Comptoir des Textiles Artificielles, a new company will be formed, to be known as "Ducilo" S. A. Productora de Rayon, which will engage in the manufacture and sale of viscose rayon. Construction will shortly be started of a thoroughly modern plant to be located near Buenos Aires. There is at present no rayon manufactured in Argentina, the entire requirements being imported, chiefly from Europe. Approximately 1,000 employees will be required when the plant gets into full operation.

* * *

Lukens Names Barnes Assistant to Vice-Pres.

Walter E. Barnes has been appointed assistant to F. H. Gordon, vice-president in charge of sales at Lukens Steel Company, Coatesville, Pa. Mr. Barnes joined the Lukens organization in 1910. He had for several years been assistant to the general manager of sales.

* * *

Burtzloff Now Vice-Pres. of American Mutual

Ernest A. Burtzloff, district production manager in the Atlanta office of American Mutual Liability Insurance Company since last October, following his transfer from Indianapolis, has been promoted to resident vice-president of the company, it was recently announced by President Charles E. Hodges. Mr. Burtzloff has been with the company for 15 years in the Indianapolis office. For two years he was vice-president of the Mutual Insurance Association of Indianapolis.

* * *

Gair Acquires Additional Plants

Robert Gair Co., Inc., 155 East 44th St., New York City, recently announced through E. Victor Donaldson, president, the acquisition by purchase of the plant and equipment of the Androscoggin Pulp Company, South Windham, Maine. The business is now operated by the Androscoggin Paper and Pulp Corp., a wholly owned subsidiary of Robert Gair Company, Inc. The resident management continues under E. K. Mansfield. The Androscoggin mill is a modern paperboard and ground wood pulp plant. Its three paperboard machines produce standard types of paper box boards as well as special boards.

The Gair company also acquired recently London Shipping Containers, Ltd., of London, Ontario, and Canadian Containers, Ltd., of Windsor, Ontario, which are devoted to the fabrication of corrugated shipping cases and containers.

* * *

New Stoker Literature

Link-Belt Company, 2410 W. 18th St., Chicago, Ill., have issued folder No. 1459 entitled "Steam Costs Go Down when you install Link-Belt automatic coal firing", containing data on underfeed screw type stokers in sizes up to 300 bhp. Folder No. 1458, entitled "The Heating Plant Pays a Profit when you install Link-Belt automatic coal firing", covers the same equipment.

* * *

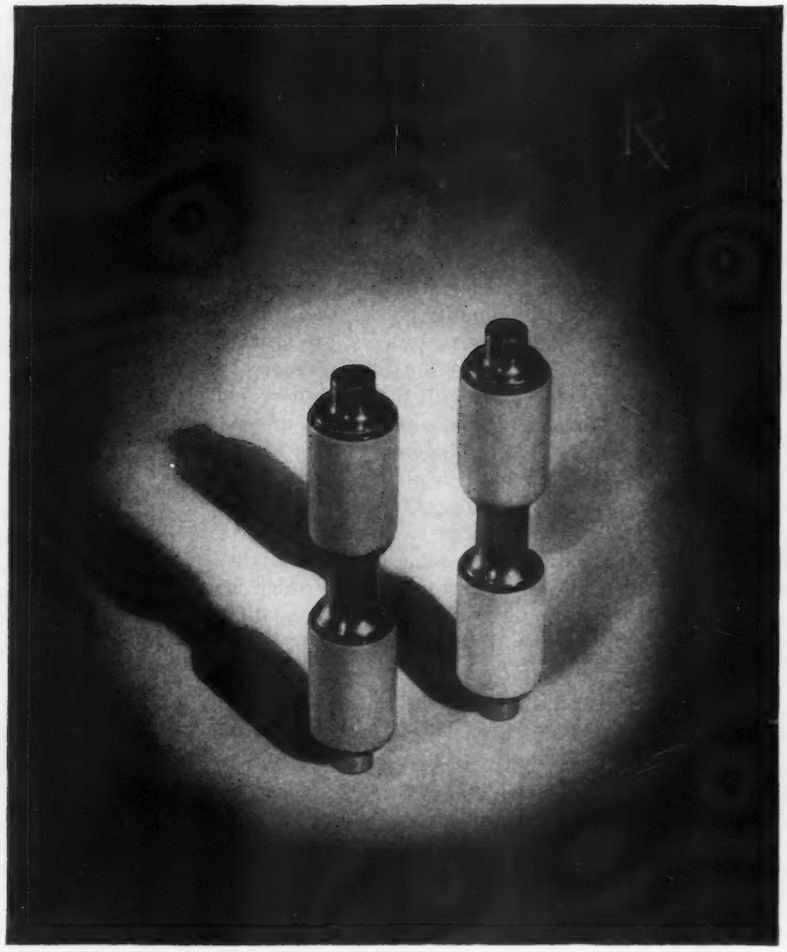
Textile Patents for Carolinians

In the recently issued patents to Carolinians, textile patents take the lead, according to Paul B. Eaton, patent attorney, Charlotte, N. C.

Harry B. Iler of Greenville, S. C. was issued a patent on a sizing apparatus whereby the selvage threads in a warp can be subjected to a less amount of sizing than the other threads. This comprises means whereby the selvage threads are not immersed in the bath but are raised and lowered with the other threads and receive the proper amount of sizing from contacting rollers running in the sizing solution.

W. P. Hornbuckle and R. F. Craig of Mount Holly, N. C., secured a patent on a method and apparatus for extracting dye and treating solutions from packages of yarn. The packages of yarn are first subjected to suction to withdraw the dye and then the packages are placed over outlet ports from the suction fan and the exhaust from the fan is forced through and out of the packages. The suction removes the dye and prevents it from dripping down the exterior, resulting in spotted yarn. Packages can be subjected to suction and others to blowing at the same time from the same apparatus.

SPINNA CALF
is being prescribed



BEING CERTAIN of the unusual merits of SPINNA CALF, prominent people in the trade are definitely recommending it for long draft spinning.

A. C. LAWRENCE LEATHER CO.

Specialists in Textile Leathers

BOSTON, MASS. PEABODY, MASS. GREENVILLE, S. C.

Fabric *Quality* begins with the *Yarn*

Producing Quality Yarn

To produce a quality yarn that is clean, strong and as even as possible is the object of every cotton mill, and this can be achieved only through a process of cleaning, removal of the short fibers, attenuation of the fibers, and spinning, which takes place from the time the bale is opened until it reaches the spinning department. With competition on an equal basis between mills, it is more important than ever that each process is performed as efficiently and economically as possible, still producing quality goods. All of these processes, except the final spinning process, are a part of the carding department, therefore the overseer of this department should see that all the machinery is kept in good operating condition, always putting out maximum production. This can be done only by overhauling the machinery in each department regularly and systematically, and adopting systems by which the minimum amount of time in production is lost. With working hours limited, in some cases, it might be more economical to install new machinery which is more efficient, producing yarns of a better quality with increased production at a saving of time and labor.

Starting in the opening room, the cotton best suited to produce the yarn specified is first selected. These bales are so arranged that they can be mixed thoroughly as they are fed into the breaker, and if waste is also fed the amount should never exceed the specified percentage. The cotton should then be left in the bins for as long a time as possible to allow it to regain its natural condition.

In the pickers is the first place where the cotton is arranged in suitable form for sizing. The laps should all be of the same length and uniform in weight. For this reason, the evener motions and the measuring motions should function properly at all times. The maintenance of machinery in this department is of special importance; the machines being few in number, with many parts traveling at high speed, they can easily get out of commission, and also the production of each individual machine is high. Therefore, one would retard the production of the mill more if stopped for too long a period. In the picker the threshing out of the heavier impurities is accomplished best when the feed rolls and grid bars are set the proper distance from the beater.

Carding comes next and is considered the most important process in the handling of the cotton. Its effectiveness depends a lot upon the conditions and the setting of the machine. By grinding light and often, the clothing on the cards can be kept in good condition. Efficiency in carding can be maintained by cleaning and setting the screens, licker-in, feed plates, flats and doffer regularly, whenever it is seen that they need it.

On the drawing frames the gradual attenuation of the fibers and the evening of the sliver begins. The thoroughness with which this process is performed has much to do with the uniformity of the finished product. The condition and settings of the rolls will affect the evenness of the sliver. The bottom rolls should be smooth, minus the nicks which are sometimes made by operatives using a knife or other sharp instrument in cleaning the rolls of sliver which sometimes wraps around the rolls. If the top rolls are leather covered, they should also be smooth, minus flats or flutes which are caused by their being weighted down at a time when the frame has been stopped for a long time. These rolls if beyond repair, and the rolls which have lost their resiliency, should be re-covered, and the rest varnished regularly, to retain their smoothness. To maintain the correct weight of finished sliver, it is sized periodically on each frame and the gears changed only when absolutely necessary. Long piecing up at the back should be prohibited and stop motions on the frames should be effective constantly. Of special importance is keeping the clearers clean for nothing is so noticeable in the succeeding processes as the waste in the sliver which is sometimes drawn in off of the clearers, which was not removed by the operator.

The attenuation of the fibers continues on the fly frame, and the sliver is gradually reduced in size. This department starts at the slubbers where a coarse roving is produced and through a process of doubling and drafting in the intermediates and speeders, a fine roving is produced suitable for the final drafting and spinning process. The same precaution should be taken here as to roll settings, etc., as on the drawing frames. The roving is sized periodically to make sure that the frame is delivering the correct hank. A slight twist is inserted, just enough to keep the fibers in the roving together as it is wound on the bobbin and released in the succeeding process. The roving is laid on the bobbin in a pyramidical fashion so that when the bobbin is full it can be handled without having it fall apart. The flyers must be kept smooth and well polished, to allow a smooth passage for the roving. The carriages should have a free vertical movement. This calls for regular lubrication of the frames, with all belts kept tight, and the builder motions inspected carefully to see that all motions obtained through the builders is secured without strain.

The final drafting takes place on the spinning frame, and every precaution should be taken to prevent the making of imperfect yarns in this department. The most important of these are the condition and setting of the rolls, the condition of the rings and the size of the travelers. The covering on the rolls should be as perfect as possible, and the rolls should revolve freely in their bearings and be properly weighted. The clearers here should be kept clean and piecing up done with care. The rings, taking it for granted that they have been well taken care of since installation, are as round as it is possible to make them so that little resistance is encountered by the traveler as it circles around at high speed. A traveler should be of the right weight; not too heavy, for this would cause too great a tension on the yarn, breaking it occasionally, and also increase the friction between the ring and traveler causing excessive wear of the rings; not too light, as this has its drawbacks. The yarn itself would be affected, with ballooning, unequal distribution of the twist and occasional breakage.

CONTRIBUTOR NO. 6311.

Front Page News

* * * * PUBLISHED BY THE JOHNSON BRONZE COMPANY * * * *

NEW DEVELOPMENTS IN BRONZE FOR TEXTILE MILLS

PATENT APPLIED FOR

GRAPHITED BRONZE SADDLES SET NEW RECORD

A new operating record was established recently by the Johnson Graphited Bronze Spinning Frame Saddle. 5000 continuous hours without lubrication—and yet showed absolutely no sign of wear.

This test was made in a prominent textile mill under the supervision of Johnson Engineers. Plant executives were agreeably surprised when they definitely checked the facts.

The combination of graphite and Bronze in this particular . . . yet highly important part, eliminates entirely the necessity of a lubricant. There is a definite saving in oil and oiling operations.

The fact that this saddle showed no trace of wear is important in that it provided a constant uniform yarn and aided considerably to the general satisfactory performance of the machine. The elimination of oil prevents spotted or damaged yarns.

Sample saddles are available for tests in your own mill. Your request should be made to the home office.

COMPLETE STOCKS CARRIED IN ATLANTA

Your needs in maintenance bronzes such as Johnson UNIVERSAL completely machined Bronze Bars; Johnson General Purpose Bushings and Johnson Electric Motor Service Bushings can be filled . . . without delay . . . from our Atlanta warehouse, located at

544 Spring Street, N. W., Atlanta, Georgia.

Requests for Bulletins . . . or for Samples should be made to the home office.

ELIMINATES OIL HAZARDS AIDS MACHINE PERFORMANCE

Research, plus exhaustive test have brought to light many new and interesting developments in Bronze for Textile mills. Johnson Engineers, working in conjunction with engineers and owners of many large and prominent mills, have made great strides towards increasing machine performance and cutting maintenance costs.

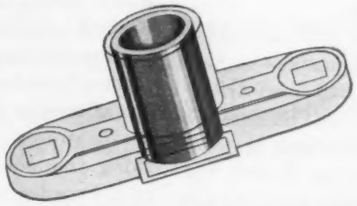
Bronze . . generally recognized as the ideal bearing material . . is made increasingly valuable by the addition of lead and graphite. The Johnson Bronze method of combining bronze and graphite . . a thoroughly patented process . . retains the necessary bearing characteristics and provides, in addition, the required lubrication.

With Graphite as a fundamental part of the bearing, operations such as constant oiling and such dangers as oil spots on goods in process, are eliminated.

These new bearings were developed to meet certain specific applications such as: Picker Evener Shafts; Card Top Flats; Card Feed Roll Drive Shafts; Feed Rolls; Drawing Calender Rolls; Coiler Shafts on Cards and Drawing; Speeder Drive Heads; Intermediates; Slubbers; Spinning Frame Heads; Spinning Cylinders; Warpers; Spooler Cylinders; Slashers; Loom Harness Motion Shafts; All Loose Pulleys in Mill.

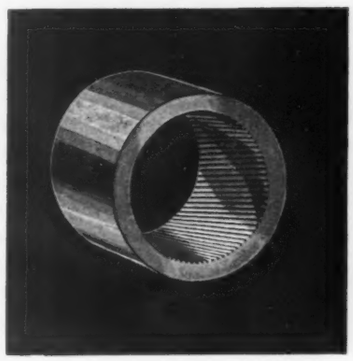
SAVING WORN ROCKER SHAFT BRACKETS

It is no longer necessary to discard worn Rocker Shaft Brackets. The simple application of a Johnson Bronze General Purpose Bushing will give longer life and more efficient performance to the bracket.



This bushing can be applied to the bracket or to the shaft and in either case works entirely satisfactorily.

Johnson General Purpose Bushings are available in over 600 sizes, machine finished, ready for assembly. Write for a copy of Bulletin No. 340.



GRAPHITE THAT "STAYS PUT" . . .

Johnson Bronze Graphite Bearings provide for from 40% to 45% of graphite contact with the shaft. Minute dovetailed grooves are cut into the metal longitudinally at a lead of 7°. Into these the graphite is compressed and permanently held.

The graphite itself is not soluble in water, oil or gasoline. An occasional application of oil or grease greatly prolongs the life of the bearing.

JOHNSON BRONZE

Factory and General Offices
New Castle, Pa.

Branch Offices and Warehouses
in Principal Cities

CURRENT TEXTILE TOPICS ....

Talk of the Month

AMID the turmoil of conflict between the cotton textile industry and the AAA, on the discriminatory processing tax, one thing stood out in clear perspective and that was the need of a united stand for individual rights in government. We have heard in recent years a great deal of talk about the way government is heading in this country: toward dictatorship; toward socialism; threatened by Communism or what not. Irrespective of what the trend, it is certain that government is subject to change, even while it nominally remains what it was. While we still have a representative legislative body, we also have an Administration apart, given emergency powers of far-reaching extent which are in the hands or control of so-called brain trusters.

Trust Must Be In Brains In Era of Brain Trusts

This beginning does not read like the start of an industrial survey, but such are ramifications of government in the present state of things, it is just that. And the import of it is that the cotton textile industry has entered an era in which everyone, from employers down to the last worker (even the textile community at large), must exert a concerted power for the preservation of its rights in the national program. The industry was quick to co-operate with the Administration in the recovery program of the New Deal. It must be united to see that the government, vice versa, fulfills its obligations to the industry. The future holds little prospect of separation of industry from government. Thus the combined brains of the industry must be trained on legislative and administrative affairs of government, as well as upon production and marketing of cotton products.

Recent demoralizing complications stirred cotton industrialists, and civic interests with a stake in textiles, to drastic action. The industry had been driven to absolute desperation. As stated by Samuel C. Lamport, textile manufacturer of New York and regional arbitrator for the National Labor Board, the growing trend of manufacturers to move their plants out of the country, especially to South America, was the result of their finding it almost impossible to adjust operations to the conditions in the United States. When an industry represents the livelihood of millions of persons in a country and pays a due, nay undue, proportion of the Federal taxes, it has a right to be heard. Yet Secretary Wallace indicated a new conception of government by apparently taking affront that even this right should be sought.

For months, perhaps years or permanently, affairs of state will be a concern of cotton manufacture parallel or paramount to the direct business of the industry. If manufacturers are to co-operate with government, they are again, and most intensely, finding the necessity of co-operating among themselves. Right now they are facing the unknown, confronted by such things as Dr. Rexford G. Tugwell's propounding of "what could be called the third economy—the sphere which belongs neither to private profit nor to State socialism." The era of the New Deal remains one of experiment. Industry has ahead a serious problem in finding what to do for salvation.

Meantime, the progress of the goods trade for 1935 has been disappointing in the extreme, accentuating the adversity caused by the processing tax. The past month has brought some encouragement for a better trade during the rest of the year, but profits are a remote likelihood. The tendency of retail trade to show recovery in the face of confusion through the late winter and early spring was a favoring factor. Consumer activity gives promise of further expansion in the fall and preparation for the larger business, given a new impetus by the passage of the public works bill in April, should lead to a broad movement in cotton gray cloths.

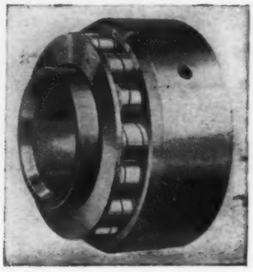
Statistics of cotton consumption for March are significant of the voluntary trend toward curtailment, while those of April will undoubtedly mark a drastic cut, with the group reduction inaugurated. This development is a healthy preliminary to a new movement of goods on a broad scale, both for the mills and the workers. Beginning in November and continuing through January, the rate of production was high for the season in anticipation of an active spring trade. March brought far less than seasonal gain in production, as a result of the many economic complications, whereas in past years output has turned up sharply in that month.

April also brought curtailment through the suspension of operations outright by mills employing many thousands of workers, because they could not bear the burden of processing taxes and other New Deal conditions, with the market for goods well below costs of production. At the time of this writing, the situation was in a state of duality. The industry was in the midst of its drive on the President for one thing and looking hopefully for another to latent signs of a broader market at improving prices. At best it appeared to be in a critical position from which a long period would be needed for correction.

New England Mill Situation

COTTON manufacturers of New England, indeed the states of the section itself, have been going through the most critical industrial period this spring in the history of the region. The industry which began the mechanical progress of the United States had been in a critical position for ten or a dozen years prior to the inception of the New Deal. Under the NRA, for a brief period there was new hope and confidence in the main-

"It Was A Wise Move to Specify Hyatts, Mr. Rogers"



"When you specified Hyatt Roller Bearings for these looms, Mr. Rogers, you made a good investment."

"They start up easier than any looms I ever saw. Don't need any running in, and they're clean, too. No oil leaks out of those sealed housings and gets on the cloth."

"Glad you like them, Joe, because we have proved by test that we save 15% in power and get more production."

"Our experience, and what I learn about Hyatt-equipped looms in other mills, too, shows that we are going to save a lot of money on repairs."

Any mill may enjoy the same satisfying results by specifying Hyatt Roller Bearings when they purchase new looms. Write for further details. Hyatt Roller Bearing Company, P. O. Box 476, Newark, N. J.

HYATT
ROLLER BEARINGS
PRODUCT OF GENERAL MOTORS

WOULD A 93% RETURN

● Saco-Pettee Spinning Frame—3" gauge. A two frame line-shaft bicycle drive. On this difficult drive, the belt shown in this picture has been in continuous service more than three years.

Whitin Forming Twister—4" gauge—Line shaft drive with large driving pulleys. Equipped with Goodrich belting several years ago, and fastened with wire lacing, these belts are still in excellent running condition.

GOODRICH MECHANICAL RUBBER GOODS FOR THE TEXTILE INDUSTRY INCLUDE:

- *Transmission Belting*
- *Spinner Belting*
- *Special Belt for moist atmosphere*
- *Multiple-V Belts*
- *Conveyor Belting*
- *Air, Water, Suction, Steam and Fire Hose*
- *Roll Coverings*
- *Packing . . . and*
- *A Complete Line of Miscellaneous Rubber Items*

Goodrich

ON INVESTMENT INTEREST YOU?

Reading Time 43 Seconds

The Martha Mills at Thomaston, Ga., tried out Rubber Belts on 48 spinning frames at an initial cost of $416 for the belts. After four years they found these 48 belts earned an average of $390 a year, or 93% on the investment. Any mill can profit approximately the same. Here's why:

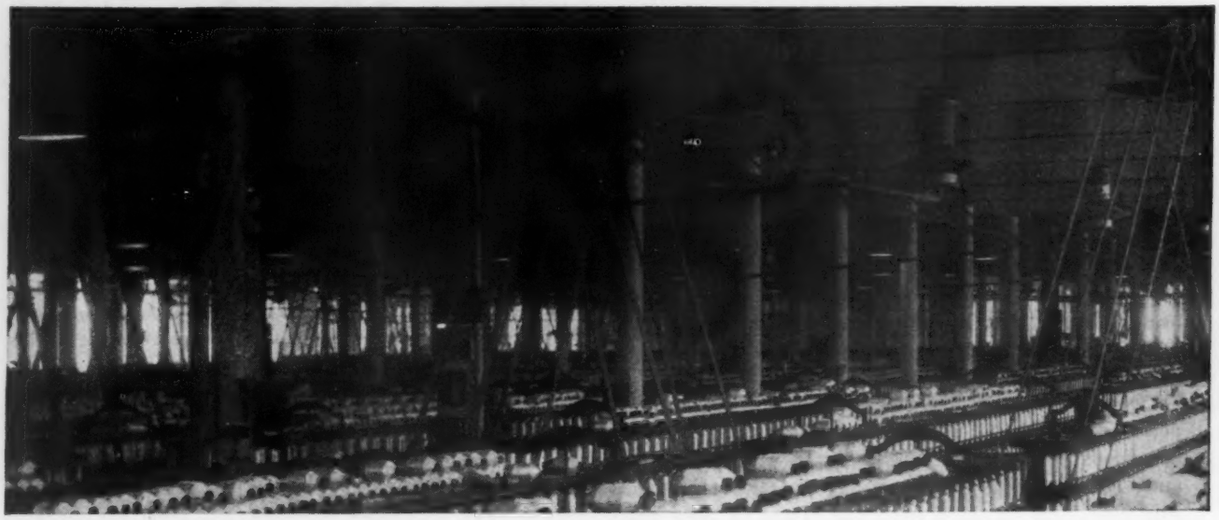
Highflex Jr. Rubber Belts cost far less than leather. Investment and carrying costs are lower.

Highflex Jr. Belts maintain uniform tension. They can be conditioned to the humidity of the room in which they operate, and thereafter will maintain uniform tension. Maintenance cost is reduced.

Highflex Jr. Belts increase production and so reduce unit cost. Because they are mechanically uniform and because they maintain exact tension, they practically eliminate slippage and maintain higher and uniform speeds which means greater production without any increase in direct labor charge.

Highflex Jr. Belts are made especially for textile drives. They always increase production and reduce cost. Isn't that worth investigating? The B. F. Goodrich Company, Mechanical Rubber Goods Division, Akron, Ohio.

A 100% Goodrich Highflex Jr. installation in the spinning room of a well-known New England mill.



Highflex Jr. Belting

tenance of what remained a great cotton-mill section. Promise was found even of a new period of new expansion in the next ten or fifteen years, under the cooperation of the government in control of manufacture on reasonable lines.

But the divided New Deal, with the AAA program imposing new obstacles, and the direct influence of Japanese imports upon New England mills, the two most important factors in the latest crisis, threatened the very foundations of the industry. The toll of mills in the past had been tremendous, but part of it was from obsolescence and there was no moment of wholesale casualties, the liquidations hitting here or there over a period of years. In a few months of this year there has been a veritable rush of suspensions and the middle of April found reports of further closings, and more threatened, involving even the larger and financially strong units of national reputation.

From Maine to Rhode Island, the experience of the past year has been deplorable, among the mills that continued to operate in the hope of eventual relief from the destructive forces which it was in the power of the government to correct. Months ago it was forecast that further liquidations would ensue and the actuality became of an ominously wholesale character early in 1935. It went on, and has been accentuated by heavy curtailment or temporary suspensions in a widespread movement. Losses the past year were largely traced to the processing tax, while the Japanese competition has aggravated the unprofitable conditions of New England mill operation.

Typical of conditions, it was recently reported that the so-called Insull group of five prominent Maine mills had a combined net operating loss last year of $725,395. In connection with the financial statement the president, Col. G. Edward Buxton, said in part: "Fine goods mills are concerned over the Japanese imports of cotton textiles. It seems apparent that a continuation of importation will shut down many American spindles." He declared that market prices in many cases were below the cost of production and forecast a "difficult" year for the industry.

Significant was the first omission by the Naumkeag Steam Cotton Company, of Salem, Mass., of a regular dividend in the 35 years of its existence. The action was taken because of highly unsatisfactory conditions in the cotton industry and the inability of this large unit of highly successful management to show a profit.

These instances of organizations continuing in the face of discouragement only emphasize the long list of casualties. Attention was drawn to New Bedford the past month, as it had been to Rhode Island earlier in the year, because of the closing of the Butler mill, a prominent unit of the Massachusetts and national fine-goods center. This mill employed 850 workers and was the third in the city to go out of business this year. As an example of the plight of New England, it is noted that New Bedford had 3,500,000 cotton spindles in 1926 against about 1,000,000 today. There were 35,000 operatives nine years ago, against 17,000 at the present time.

Other casualties in the recent list, mid-April announcements that mills would close because of the processing tax, importations and low goods prices, included: Berkshire Mills, of Adams, Mass., employing 2900 workers; Greylock Mills, of North Adams, 500; Hope Mill, Scituate, R. I., 400.

Against the cry of "alibi" for bad conditions thrown at manufacturers by AAA officials defending the processing tax and the minimizing of Japanese competition by the President himself were cited not theories but facts. It does not take a vast quantity of goods under the market price to upset all values. Moreover, it was shown here that mills losing trade to foreign goods of one sort would turn to another line, thus upsetting the normal competition of domestic mills themselves.

As to the processing tax, its imposition, said Robert Amory, president of the Nashua Manufacturing Company, at a mass meeting in Nashua, N. H., caused a tremendous and sudden increase in costs of goods commonly used by people of small incomes. No such general mark-up in prices had ever been seen in the history of the nation. The prices created by this tax, on top of advances from higher wages under the code, brought a definite consumer resistance. Another definite result was that restriction in consumer purchasing caused mill prices to slump, many could not operate at a loss and closed, so workers were forced out of jobs. And so the national program created new unemployment, necessitating further relief.

COMMENT ON THE COTTON MARKET

New Orleans, April 17, 1935.

AS YET the cotton market remains in a rather unsettled condition, for while values recovered much of the serious decline of one month ago, there remains agitation for removal of the processing tax and against the continuance of the loan plan on cotton—the crop now in the making. However, the market of late acted as if the trade is convinced there will likely be a growers' loan on the next American crop, but the processing tax is being fought in and out of Congress. What the results will be is only a matter of conjecture at this time. The further important advance in the value of silver was looked upon as constructive, as was the further rise in grain values. These favorable developments tend to increase the purchasing power of farm and mine interests, and a further important expansion of buying power is anticipated to come from large expenditures by the federal government and from credit inflation. Well informed people look forward with confidence to a further revival in general business, perhaps an important change for the better before close of the year. Recently New York advised, in part: "The sharpest business rise in 25 years was forecast for the immediate future in the weekly business review of Dun and Bradstreet."

While the smallness of the world's visible of other kinds is encouraging, it is due mainly to last year's foreign crops being generally smaller than expected earlier in the season, and to foreign spinners using more of foreign growths at the expense of American, preparations are being made for larger crops in foreign countries this year, and there is likely to be a larger American crop this year, weather and insects permitting.

Latest available figures of principal foreign production, in 478-pound net weight bales, for season 1934-35, compared with last season, are: India 3,613,000 versus 4,159,000; Egypt 1,617,000 versus 1,819,000; China 2,800,000 versus 2,726,000; Russia 1,937,000 versus 1,889,000; Chosen (Korea) 150,000 versus 147,000: Brazil 753,000 versus 468,000; Mexico 209,000

FOR

- VISCOSE
- ACETATE
- SILK
- COTTON

STRIPPER·T·S·

STRIPPER·T·S·

STRIPPER·T·S·

● STRIPPER T. S. is produced under conditions insuring absolute uniformity and complete stability.

● The stripping action is effective at a temperature well below the boiling point, thus preserving the tensile strength of the fibre.

● STRIPPER T. S. requires no acid or other accelerator to assist in the stripping operation. The application of STRIPPER T. S. requires no special apparatus, and can be used in an open dye kettle, on a jig, or open washer.

● Further information concerning the use of STRIPPER T. S. will be furnished upon request.

ARKANSAS COMPANY, INC. · 233 BROADWAY · NEW YORK

versus 223,000; Peru ——?—— versus 276,000; Anglo-Eg.-Soudan 169,000 versus 136,000; Uganda 240,000 versus 218,000; Turkey 77,000 versus 128,000; miscellaneous 1,304,000 versus 864,000.

CENSUS REPORT

United States— Bales—	This season	Last season
Consumption of lint cotton in Cotton Growing States, March	388,134	430,552
In New England States, March	74,055	97,843
In All Other States	18,946	16,475
In United States	481,135	544,870
In Cotton Growing States, 8 months	2,909,788	3,144,693
In New England States, 8 months	574,334	685,470
In All Other States, 8 months	149,905	114,984
In United States, 8 months	3,634,027	3,945,147
Mill stocks, March 31st	1,117,069	1,650,908
Stocks in public storage and warehouses, March 31st	7,784,906	7,848,361
Stocks in mills, public storage and warehouses, March 31st	8,901,975	9,499,269
Stocks in mills, public storage and warehouses, February 28th	9,534,176	10,293,372
Active spindles during March	24,571,314	26,525,454
Active spindles during February	24,925,168	26,379,906

BRITISH BOARD OF TRADE REPORT FOR MARCH

Year—	1935	1934	1933
Exports of yarn, pounds	12,000,000	12,000,000	13,000,000
Exports of cloth, yards	183,000,000	170,000,000	210,000,000

AMERICAN COTTON

August 1 to April 12— Bales—	This season	Last season
In sight, (marketed)	8,347,000	11,728,000
Exports from U. S., including Canada	3,863,000	6,361,000
Spinners takings, wor'd	8,298,000	11,058,000
Stock at all U. S. ports, April 12th	2,174,000	3,073,000

WORLD'S VISIBLE SUPPLY OF COTTON, APRIL 12TH

Bales—	This year	Last year
American	5,657,000	7,424,000
Other kinds	1,975,000	2,405,000
All kinds	7,632,000	9,829,000

Of late there has been some improvement in the export movement from the United States, shipments for week ended April 12th being 70,000 bales versus 42,000 for corresponding week last season. This was the first week in months that exports from America exceeded shipments for a corresponding week last season. The spot situation remains tight, with offerings light, and the basis high.

Recently New York advised, in part: "The anticipation of a broadening purchasing power to come from the billions of dollars appropriated for relief, and from other governmental largesse, led to more active markets in the textile division during the past week. The improved sentiment was in very sharp contrast to the depression in the trade ten days ago. In the cotton goods division it was thought that the talk of a continuation of the loaning policy on cotton in the next crop year was based on a definite policy, and that led cotton goods traders to form more definite ideas of values for the next few months."

As to the next crop, Washington, in weekly review, as of April 16, stated: "Planting cotton made generally slow advance in the northern parts of the belt, due to coolness and wet soil. In Texas planting progressed favorably in eastern parts, with some up to good stands except in the extreme south where it was too dry. Conditions continued unfavorable in northwestern parts. In Oklahoma planting made only slow advance in southern localities, while very little has been seeded in Arkansas, due to the cold, wet soil. In Louisiana and Mississippi conditions were unfavorable, and planting and growth were checked generally, while in some parts reseeding was necessary. In eastern states of the belt, growth was generally poor, with little seeding yet possible in the northeast. Chopping made slow advance in southern Georgia, while this work was begun in southern South Carolina."

TOTAL AVERAGE RAINFALL IN TEXAS IN INCHES

Year—	1935	1934	1933	1932	Normal
March	1.85	3.35	1.94	1.44	2.08
November to March, inclusive	11.48	11.87	10.25	15.51	10.20

WHAT THE SOUTHERN MILLS ARE DOING

THE Industrial Dryer Corp., of Stamford, Conn., has announced recent installations of the H-W rayon conditioners at the following plants: Greensboro Weaving Co., Greensboro, N. C.; Burlington Mills, Plant No. 2, Burlington, N. C.; Reidsville Rayon Mills, Reidsville, N. C.; Puritan Weaving Mills, Fayetteville, N. C.; Blue Ridge Rayon Mills, Alta Vista, Va.; Lexington Silk Mills, Lexington, N. C.; and the Gloria Rayon Mills, Johnson City, Tenn.

Kendall Mills, Wateree plant, Camden, S. C., have had the slashers at the plant overhauled.

Ella Mill, Consolidated Textile Corp., Shelby, N. C., is installing a considerable quantity of machinery purchased from a recently liquidated mill in Providence, R. I.

The Proximity and White Oak plants of Proximity Mfg. Co., Greensboro, N. C., are installing 65,000 bobbin holders purchased from Eclipse Textile Devices, Inc., Elmira, N. Y.

Firestone Cotton Mills, Inc., have been granted charter to operate the Loray mill in Gastonia, N. C., which was recently purchased by the Firestone Tire & Rubber Company. Plans are to place the mill in operation on tire cord and similar fabrics at an early date.

Plans are under way for an addition to the plant of Frank Ix and Sons Silk Mill which will increase the capacity by approximately 60 per cent.

A large brick building to be used as a recreation center is being erected by the Peerless Woolen Mills, Rossville, Ga.

Uxbridge Worsted Co., Uxbridge, Mass., has purchased the plant of the Adams-Swirles Cotton Mills, Macon, Ga., and will remodel it to meet their requirements. The mill has about 7,200 spindles and 180 looms.

A hosiery mill is to be erected at Stanfield, N. C., the principal stockholders being Brooks Jerome, Wade Love, Roy Furr, and others, of Stanfield. William Harvel, of Mt. Pleasant, is to be superintendent. Men's work hose, anklets, etc., will be produced.

Dunean Mills, Greenville, S. C., plan the early installation of 200 additional looms in an extension which is being erected. The new equipment is being installed to balance the machinery rather than as an expansion program.

It is reported that the Knitting Department, Wiscassett Mills Co., Albemarle, N. C., have purchased 25 full-fashioned machines for replactment and four additional machines, which will bring the total of the machines to approximately 180.

Catalog on Lighting Equipment

The Benjamin Electric Mfg. Co., Des Plaines, Ill., has published Catalog 26—288 pages of complete listings, illustrations, and descriptive material and engineering data on reflectors, lighting equipment, floodlights, fittings and sockets and signals. It is desiged to be of value to engineers, contractors, architects and users of such equipment for industrial plants, etc.

DRONSFIELD'S PATENT AUTOMATIC FLAT GRINDING MACHINE NO. 155 with FLAT TESTER

NO MORE HIGH AND LOW FLATS

"We are getting something like grinding now, Mr. Superintendent. These flats are true to a 1,000th part of an inch—This means that one of our worst carding troubles is over."

This result is being achieved daily on over 3,000 Dronsfield Automatic Flat Grinders. Every machine is equipped with its own tell-tale, the registering Flat Tester.

Grinds 3 flats at a time of any width, or 4 flats if not wider than 1⅜".

AUTOMATIC FEED - AUTOMATIC STOP

Number recommended:—1 machine for every 50 Cards.

EVERY MILL SHOULD HAVE AT LEAST ONE MACHINE.

For further particulars and prices write to Dronsfield's Sole Agents for U. S. A.

JOHN HETHERINGTON & SONS INC.

250 DEVONSHIRE STREET,

BOSTON - MASS.

New Textile Equipment and Publications . . .

New Bulletin on Flow Meters

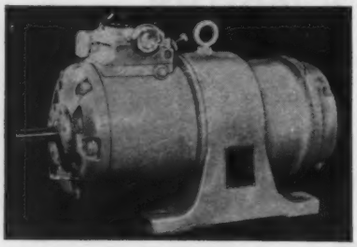
The Foxboro Company, Foxboro, Mass., has recently issued a 48-page bulletin, No. 200, entitled "Meters for Steam, Liquids, and Gas", which covers the complete line of Foxboro meters for industrial uses. Of particular interest is the description of the new Universal flow meter developed to measure steam, water, air, oil, gas and all kinds of chemical solutions under any industrial conditions. In addition to the sections describing flow meters at work and the types of meters and their functions, there is a complete section covering the construction details; and much valuable information on flow engineering and measurement.

* * *

A New Variable Speed Power Unit

A new variable speed power unit with interesting textile applications has been developed by The New Departure Manufacturing Co., Bristol, Conn. This power unit consists of a constant speed electric motor built in as an integral unit with a transmission whose speed is infinitely adjustable over its entire range. In fractional horse-power and 1-hp. sizes with a standard 1,750 r.p.m. motor, the output speed range is from 560 to 5,600 r.p.m., or a ratio of 10 to 1; in larger sizes the range is from 600 to 3,600 r.p.m., or a ratio of 6 to 1. It is also furnished with 1,200 and 900 r.p.m. motors for correspondingly lower speeds.

In the power unit, hardened steel rollers in pressure contact with equally hard steel races are utilized to transmit power. In the adaptation of this



New variable speed unit . . .

principle, it is recognized that the positive rolling contact of the rollers and races or the traction of the one upon the other will not be interrupted so long as the pressure of the rollers upon the races is proportional to the torque load or tangential force. Therefore, in this new variable speed power unit, an automatic pressure device is employed which utilizes the imposed torque load itself to generate the required pressure between the rollers and races. So sensitive is this device to the slightest change in the imposed torque that the roller contact pressure is positively maintained under either continuous, variable or shock loads, in a definite proportion to the transmitted load, it is pointed out. Because of this automatic control of contact pressure, it is explained, the unit gives a positive drive under all conditions including overload.

The new unit has built into the speed control an automatic return to the low speed starting position, to assure that upon stopping, either through failure of current supply or intentional shutdown, that the unit will automatically return to the low speed, high-torque position, avoiding overload of the motor when again started. If the unit has been set for a certain desired speed, when stopped, it will, when started, automatically accelerate until this speed is again reached and will maintain such driving speed until changed by operation of the speed control.

Any desired speed may be instantly obtained by operation of the speed control located on top of the unit. This control is very light-acting, requiring but a touch of a finger, and may be operated while the unit is running, or any speeds may be pre-selected before the unit is started.

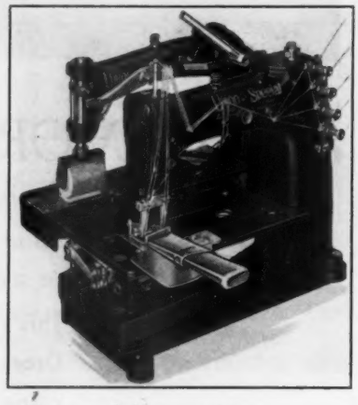
Where the power unit is located beyond easy reach of the operator, the control on the unit may be connected by a flexible shaft to a dial, mounted at any convenient point; and the operator may select and change speeds as readily as though the unit were at his side. In cases where the power unit must be mounted at such a distance as to prohibit the use of a flexible shaft connection, speed control may be accomplished electrically by the use of very small synchronous motors, one at the operating station and the other connected to the speed control on the power unit.

The power unit is compact, fully enclosed, and not affected by weather conditions or oily atmosphere, it is brought out. The motor shaft and variable speed output shafts are in line, and both shafts, as well as all other rotating parts, are rigidly and permanently supported by ball bearings. All revolving parts are symmetrically and accurately in balance, it is pointed out, and the smooth rolling motion of accurately ground rollers and races always in positive pressure contact results in a quiet drive free from vibration at all speeds. The only lubrication attention necessary is the addition of oil at infrequent intervals. Lubrication of all parts within the power unit is entirely automatic.

* * *

New Machine for Workshirt Manufacturers

A new four-needle industrial type sewing machine designated as Class 54100, especially designed for attaching center plaits on work shirts, has been announced by the Union Special Machine Co., Chicago, Ill. It produces the chain stitch, Type 101, using four ends of thread, and folds, guides, and stitches a center plait in a single op-



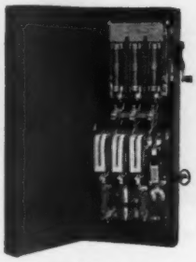
New workshirt machine . . .

eration, at an increase of 25 per cent in operating speed made possible by mechanical construction and auxiliary fittings. A two-shot oiling system for all the mechanism below the cloth plate, an internal oiling system for the looper drive eccentric, elimination of rttaining springs on the underside of the loopers, and a re-designed one-piece feed dog that extends a greater distance behind the needles and improves the feeding of the material, are other features. Special steps have been taken to make the machine chain out freely and to insure positive tying of stitches at the end of the fabric. The machine is available in several different styles. Style 54100D is designed for attaching garment length single piece extension center plaits, and may be made a two-purpose machine by equipping it with an extra attachment for making cut-on center plaits. Style 54100C is a similar machine except that it is designed espe-

For Low-Cost Operation

G-E screenless, open textile motor. Free passage of lint through the motor is facilitated by fans on rotor, by large, smooth ventilating passages, and special varnish treatment of windings

in Lint-Laden Atmosphere



G-E switch for convenient, efficient control of G-E screenless, open textile motor

THE General Electric screenless, open textile motor—for spinning-frame drives, twisting-frame drives, and other applications in lint-laden atmosphere—offers you definite cost-reducing advantages.

The special design of this motor provides for ready passage of lint through the motor, thus effectively eliminating the need for screening or enclosure. This and other design and construction features are your assurance that G-E screenless, open textile motors will give you the following operating advantages:

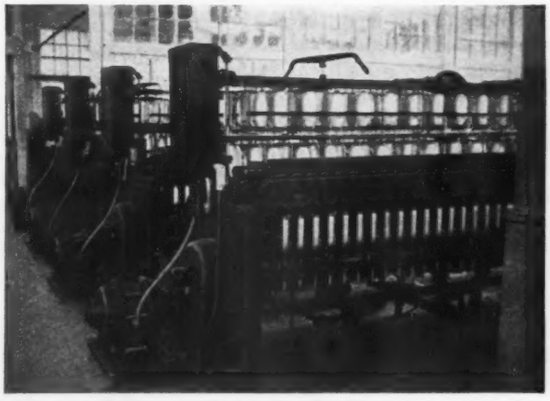
1. ***Low maintenance***—Because there are no screens or other loose parts to handle or clean. Streamlined air passages pass lint readily, and cleaning is minimized.

2. ***Longer bearing life***—Because hard-tin-babbitted, accurately ground bearing linings are used in sleeve-bearing motors. In ball-bearing motors, cartridge-type dust-tight housings permit disassembly without exposing the bearings; bearing cleanliness means long life.

3. ***Dependable service***—Because of inbuilt reliability and scientific design that give these motors the operating characteristics best suited for textile service.

Get these operating benefits for your mill by installing G-E screenless, open textile motors. Investigate, also, other cost-reducing equipment, such as power-generating and transmission apparatus, and wire and cable, which General Electric makes for the textile industry.

An experienced sales engineer in the nearest G-E office will be glad to help you select the right equipment to meet your electrical requirements efficiently and economically. For additional information, simply write or call the G-E office nearest you. General Electric, Schenectady, N. Y.



G-E screenless, open textile motors applied to spinning frames

020-150

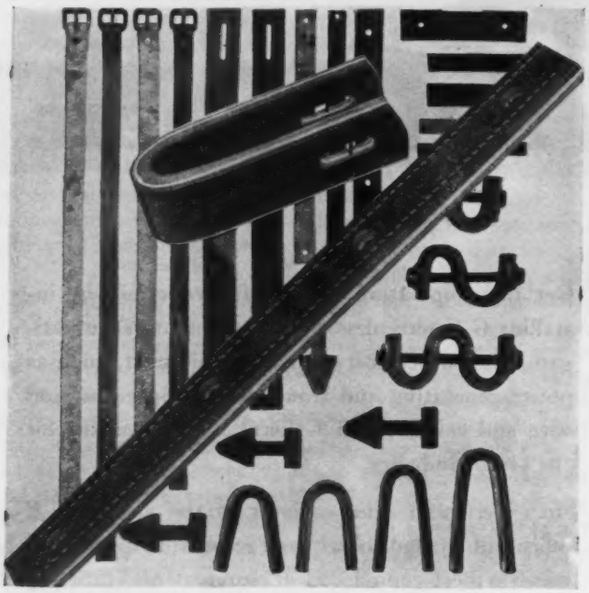
GENERAL ELECTRIC

cially for cut-on center plait work. Both units are equipped with auxiliary pulling machines designed to simplify handling of flannels, flannellettes, and the heavier covert materials. Styles 54100D and 54100E are similar, except that the pulling mechanism is not included.

* * *

New Line of Textile Leathers

After two years of practical tests in several hundred mills, Chicago Belting Company, 113 North Green St., Chicago, Ill., have announced a line of textile leathers, including jack, check, harness, hold-up, lug and bumper straps, stop bar break pads, picker leathers, cone belts, and gainer belts for the Universal No. 50 winder and the Foster No. 75 winder. These products are made in Reliance brand oak leather, Old Grizzly hair-on leather, and in a new patented White Strip brand which has an extra ply of specially treated hard leather, white in color, which, it is pointed out, mill tests show has added greatly to the life and service of lug straps and bumper straps.



Composite view of new line of textile leathers .

* * *

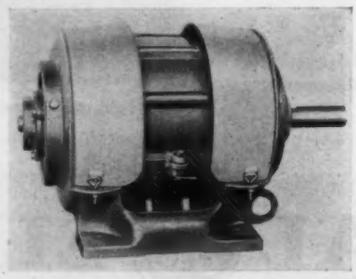
New Raw Stock Dryer

Philadelphia Drying Machinery Co., 3351 Stokley Street, Philadelphia, Pa., have announced a new raw stock dryer, which is self-contained, with no motors, projecting parts or belts on the side aisles. The driving mechanism is compactly mounted in an offset at the end of the machine, with an efficient group-drive system—a number of fans being mounted on one shaft, each group being driven by a single direct-connected motor. The inside of the machine is "stream-lined", the air passages being designed with rounded corners to eliminate resistance and provide proper distribution of the heated air. Fans of the turbine type recirculate the air. An improved conveyor apron is provided with chains at the side to assure straight-line movement and uniform width. The apron is endless. The steam coils are arranged in staggered banks, on the "pipe within a pipe" system; heavily insulated steel panels are used to prevent radiation and heat losses. Both the conveyor and the automatic feed are driven through variable speed transmission, in order to provide for various drying speeds.

* * *

New Mill Motor

Allis-Chalmers Mfg. Company, Milwaukee, Wis., have announced the development of their "Quick-Clean" motor, designed expressly for cotton mill service. The construction features as explained in a recent bulletin provide protection from accumulation of cotton lint within the motor without sacrifice of sturdy structure and good performance. "Seal-Clad" shields completely enclose the stator windings at both ends, providing hard, smooth Bakelite surfaces to which lint does not adhere. Removable covers provide easy means of exposing the inside of the motor for inspection during operation. These motors have cartridge mounted ball bearings, long leads for flexible conduit, and straight or tapered shaft extension. They are available in 5, 7½, 10 and 15 horsepower ratings.

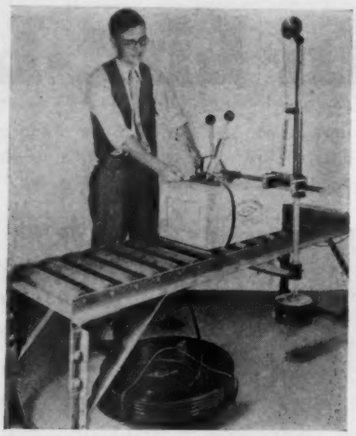


New mill motor . . .

* * *

Retainer for Steelstrap

Acme Steel Company, Chicago, Ill., have recently developed a new retainer for their product Steelstrap for reinforcing boxes, packages, etc. This new strap retainer is said to be especially adapted for use with conveyor systems or strapping tables, where space does not permit the placing of any other type of equipment. The coil of strapping lies in a horizontal position on a steel pan. Casters make it possible to move the retainer around easily. The tray is out of the way when placed under a conveyor or table. The dimensions are 24½ inches diameter and 9½ inches height.



Steelstrap retainer . . .

* * *

Bulletin on Roller Bearing Spindle Bolsters

Different types of roller bearing spindle bolsters are featured in a new folder distributed by SKF Industries, Inc., Front St. and Erie Aye., Philadelphia. They are oil-cushioned ring brake bolster, bolster with cylindrical contact surface, and bolster with conical contact surface. A tabulation lists 3,524,064 SKF roller bearing bolster-equipped spindles sold throughout the world to June 30, 1934.

* * *

Thermometer Bulletin

H-B Instrument Company, 2518 N. Broad St., Philadelphia, Pa., have issued Bulletin No. 600 describing their line of dial and recording thermometers, and humidity indicating instruments.

IF the rising cost of labor is threatening your profit margin, you can help maintain a balance by modernizing with high speed Union Special Machines.

Production will be increased without a corresponding increase in labor, and unit cost correspondingly reduced.

Make an analysis of your sewing costs. Our Form 374 is especially prepared to enable you to do this, and is available on request. With it you can determine exactly what each operation costs on your present machines.

Then if you wish we will demonstrate what modern high speed Union Specials will do on the same operations and the comparatively short time in which they will pay for themselves.

Protect your future profits now. Meet the rising cost of labor with high speed, high production Union Special machines that will keep your sewing costs at a profitable level.

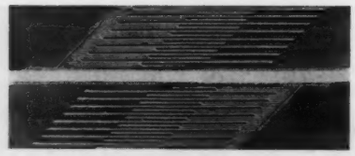
Union Special Machines set modern standards of sewing room efficiency. For example, our Style 39200 machine cut sewing costs 16.1% in one plant. This is typical of many cases where Union Specials were used to maintain profitable operation. Can we give you data applicable to your own operating conditions?

UNION SPECIAL MACHINE CO.

400 North Franklin Street **Chicago, Illinois**

Stop Motion for Warping Frames

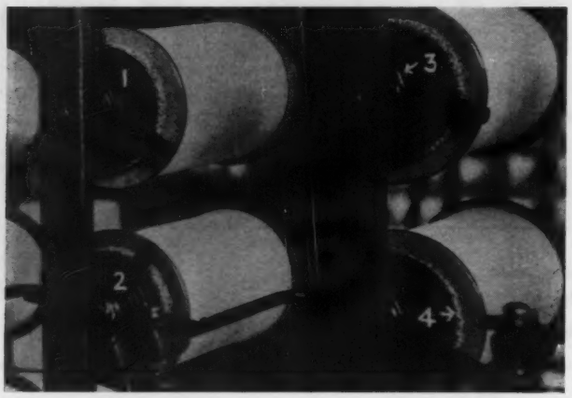
Barlo Engineering Corp., 3728 30th St., Long Island City, N. Y., have produced a new stop motion for warping frames, which consists of a rotary mercury switch on each spindle operated by the centrifugal principle. Adjustable, insulated buss bars are mounted on each spindle directly behind the rotor for electrical contact. A master control box is placed directly on the carriage under the warper with red and green light indications. When an end breaks, the light changes from green to red and the automatic control causes the warper to stop promptly. This prevents unnecessary loss of time



New belting splice . . .

was necessary to dismantle the pulleys to install an endless belt. The ends of the Compass belt are joined together by dovetailing the load-carrying core of cords at the splice and by vulcanizing the spliced portion of the belt with a portable vulcanizer developed for the purpose. The Compass Cord belt is so constructed that the load is carried entirely by a layer of cords, laid side by side, embedded in rubber and sheathed in a protecting fabric envelope, it is explained.

For belt drives where endless belts can be easily and quickly installed, the company announce they will continue the manufacture of Compass Cord endless belts.



Showing different elements in new stop motion . .

in looking for broken ends. A close-up illustration of four spools illustrates four of the features. It shows (1), the rotor; (2), the mercury channel; (3), the four prong tension spring to insure contact; and (4) the pneumatic clutch on which the spools rest. As stated, the control box is located on the carriage underneath the warper.

This stop motion is entirely automatic, with no switches or handles for manual operation; in case of power failure, however, manual operation may be readily accomplished. The manufacturers further claim that the stop motion acts as a perfect tension device assuring uniformity and preventing chatter, as well as allowing free-wheeling. The device is also applicable to all horizontal warpers without modification of the creel. It is further explained that the stop motion does not touch the yarn to cause chafing or broken fibers or filaments.

* * *

New Splice for Transmission Belting

Goodyear Tire & Rubber Company, Akron, Ohio, have announced a patent vulcanized splice for Compass Cord transmission belt, by means of which these belts can now be made endless on the drive; permitting the use of the belt in roll-lot, non-endless lengths for use on belt drives where it formerly

* * *

Large Capacity Electric Blower

Ideal Commutator Dresser Co., 1094 Park Ave., Sycamore, Ill., have announced the development of a "Jumbo" model portable electric cleaner, which utilizes a full 1-hp. motor, at 11,000 r.p.m., is equipped with ball bearings, and has an air volume discharge of 24,200 feet per minute. The weight is 14 pounds, and it is equipped with 20 feet of heavy duty cord and rubber plug, and is available for a.c. or d.c. current. It is designed for use as a blower, a vacuum cleaner, and for spraying paints, insecticides, etc.

New blower . . .

Pick Counter with Center Drive

Durant Manufacturing Co., Milwaukee, Wis., have announced the production of a loom pick counter with center drive, making the counter applicable for use on either end of the loom, universally interchangeable, it is explained. An improved type of day and night shift switch has been moved

Counter with center drive . . .

to the front for better view. The switch may be operated to switch the record from one shift to the other, whether the loom is running or idle.

Rust-proof construction is used, and the raised, distinct figures on the dials can be seen from a greater distance than formerly, it is explained. Re-setting and non-re-setting models are made, the former with the usual lock and key. A positive lock of new design prevents the creeping of either set of dials while the other set is running, or when the counter is in neutral, and a sealed case is used to prevent tampering with the record. The connection with the loom shaft is of the split worm and housing type; it clamps on the loom shaft and permits installing the counter without drilling into or removing any part of the loom, it is explained.

* * *

Book on Liquid Chlorine

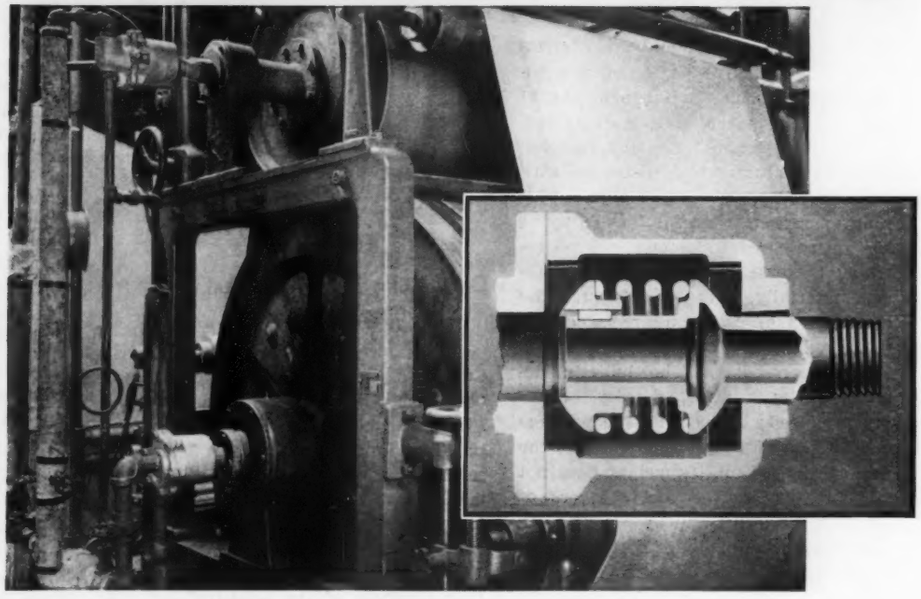
Solvay Sales Corporation, 40 Rector Street, New York City, have published an interesting book of 40 pages on "The History, Properties, Uses, and Handling of Solvay Liquid Chlorine". It is well illustrated, and contains a great deal of practical, useful information and data for users of this product.

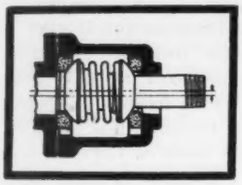
* * *

New Oil-Immersed Magnetic Starters

A new line of oil-immersed magnetic starters of the reduced-voltage, auto-transformer type, in which all arcing contacts are six inches under oil, has been developed by the General Electric Co., Schenectady, N. Y. An induction-type temperature overload relay is

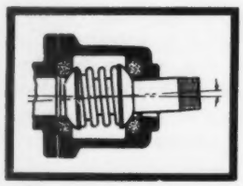
What!... a stuffing box without packing or adjustment?





Lateral flexibility

This provision compensates for movement of rolls in bearings, pipe expansion, etc.



Angular flexibility

This provides for angular misalignment, irregular rotation, etc.

YES, a glance at the sectional illustration of the Johnson Rotary Pressure Joint above, reveals a lot of complications missing—and therefore a lot of troubles missing. It has no external springs—no adjustments of any kind—no packing. And it not only eliminates these complications; it does its job better and far outlasts the complicated kind of stuffing boxes.

How? Note that it merely consists of a housing, two spherical end members which are keyed together, and two carbon-graphite rings. The spherical members are forced against the graphite rings by the pressure within the joint. The ring at the right seals the joint, and both rings serve as bearing surfaces. Moreover, these carbon graphite rings are entirely self-lubricating. As steam pressure increases, the spherical member at the right is forced more tightly against the seal ring, and therefore the adjustment for various pressures is entirely automatic.

This entirely wipes out all packing troubles — all adjustments — all possibility of power losses and excessive wear due to over-tightening. No less important are the provisions for angular and lateral misalignment described and diagrammed opposite.

How successful are these joints in actual service? So successful that we are making the remarkable offer explained below. This is your opportunity to know this stuffing box as hundreds of plants know it—without any obligation whatsoever. Ask for new bulletin describing the Johnson Rotary Pressure Joint in detail.

THE JOHNSON CORPORATION

1815 Wood Street Three Rivers, Mich.

An UNUSUAL offer

To avoid even the implied obligation of the usual "free trial offer," we make this proposition: Install a Johnson Joint wherever it can be subjected to a thorough test—then, after it has been thoroughly tested, return it to us at OUR EXPENSE. All we ask is that you give us a report on its performance. We do not ask you to keep it if it proves satisfactory. Simply fill out the blank opposite.

Johnson

Rotary PRESSURE JOINT

THE JOHNSON CORPORATION
1815 Wood St., Three Rivers, Michigan

We are interested in the proposition which appears opposite. Please provide us with a form on which we can state our conditions.

Individual.....

Company.....

Street and Number.....

City and State.....

used, also mounted in the oil. Either current-limit or time-limit acceleration is available, and an ammeter attachment can be supplied if desired. Ratings range upward to 600 amperes at 600 volts and 200 amperes at 2,500 volts.

* * *

The "Roto-Koner" Winder

Universal Winding Co., Boston, Mass., have prepared and are distributing an attractive pamphlet describing their Leesona "Roto-koner" No. 44 winder. This machine, it is explained, employs the original rotating traverse roll for winding, which dispenses with the use of cams, producing a quiet-running operation. Careful tensioning of the yarns, careful slubbing and the rotating traverse roll reduce end breakage materially, it is pointed out. The elimination of cams and reciprocating parts reduces maintenance, lubrication and upkeep costs. The bulletin describes how "uniform-density" cones are produced; by locating the package on the side of the roll, so that as the package builds up, its weight does not add pressure to the inside layers of yarn on the cone; and by pivoting the cone arms from below so that the force of gravity is always kept at an angle off the perpendicular and the weight of the cone arm is constantly subtracted from the weight of the package. Third, the cone lays across the axis of the rotating traverse roll, so the driven part of the cone is near the center. This, it is pointed out, removes pressure from both ends of the cone.

* * *

Shipping Packages as "Billboards"

The Hinde & Dauch Paper Company, Sandusky, Ohio, have devised and are distributing a unique piece of literature, consisting of a large card representing a corner street-scene on which is super-imposed a shipping box as a billboard. Illustrations of how leading manufacturers are using the surfaces of their shipping containers to tell their story are given. The company points out that "your corrugated fiber shipping boxes place before you thousands of square feet of clean, valuable display space which, from an advertising standpoint, can be likened to a billboard. The strategy of shipping box advertising is to tell a story briefly and plainly. Shipping box advertising is general publicity of the highest type. It can be used to reiterate the main selling theme, and help establish a slogan, a trademark or a new package design." The unique idea offers great possibilities to textile manufacturers using this type of package to further promote their products, and to concerns shipping products to the textile mills.

Timely News Items With a Textile Slant . . . .

Taylor Represents U. S. Textile Machine Company

A. W. Thomas, secretary and general manager of the U. S. Textile Machine Co., Scranton, Pa., has announced the appointment of W. S. Taylor as New York Sales representative for the company's rayon and silk equipment. New York sales offices are located at 171 Madison Ave., New York City.

* * *

C. B. Nolte Made President of Crane Co.

C. B. Nolte was elected president of Crane Co. on March 26. J. B. Berryman, who had been president since 1931, and who has been connected with the Crane organization since 1892, became chairman of the board. As chairman, he will be able to transfer his heavy responsibilities to Mr. Nolte's shoulders, and at the same time, will be in position to follow closely the further progress of the company.

The new president assumes his duties at a most opportune time. Crane Co. has forged ahead vigorously through the depression years, and after putting operations on a profitable basis in 1934, is ready to step right along with the upturn in economic conditions. Along with the building industry and all manufacturers catering to large industries, Crane Co. has been fighting an uphill battle until now the company looks ahead to a prospect of ever widening activity. For that reason everyone in the industry is especially interested in his appointment and under his guidance confidently expects the organization to carry along to even greater success, in line with the principles and practices so long associated inseparably with the name of Crane Co.

C. B. Nolte

Since 1909—just after he received his Bachelor of Science degree in Mechanical Engineering at the University of Illinois—Mr. Nolte has been with the Robert W. Hunt Company, consulting, testing, and inspecting engineers. This concern is the largest in its field, with offices and chemical, metallurgical, concrete and physical testing laboratories at twenty-one of the larger centers in this and foreign countries Successively he became division manager, manager, vice-president and general manager, until in 1930, he was appointed president and general manager. This position he held until he was elected to his new office.

He is a member of the American Society of Civil Engineers, American Society of Mechanical Engineers, American Society for Testing Materials, American Railway Engineering Association, Western Society of Engineers, and Pacific Railway Club.

* * *

Notes on "Cotton Drawing and Roving"

Gilbert R. Merrill, 364 Varnum Avenue, Lowell, Mass., has now issued a book on "Cotton Drawing and Roving", which is available from Mr. Merrill, bound in red pressboard, at $2.75 per copy, postpaid. This follows the book on "Opening and Picking", described in the October 1934 issue of Cotton.

These books are based on notes prepared particularly for use in the classes of the Lowell Textile Institute, where Mr. Merrill is a member of the faculty. The notes are written to give students an outline of the machinery commonly used today. In "Cotton Drawing and Roving" practically all of the machinery of this type on the market today is discussed and described in these notes, with illustrations showing the operation of the various types of machines, and with considerable practical data, calculations, constants, etc., etc.

* * *

Armstrong Cork Forms Building Materials Division

Organization of a Building Materials Division to provide greater concentration of sales effort on the company's products for the building field is announced by the Armstrong Cork Products Company, of Lancaster, Pa.

The new division will be headed by H. R. Peck who has a broad background of fifteen years of experience with the company. G. C. Denebrink, who has had wide experience in sales and merchandising activities of the company, will be assistant general manager of the division.

Six departments will be coordinated in the building materials division. T. R. Nunan will be in charge of the low temperature insulation department

which will handle the sale of corkboard, cork covering, and the materials required for their erection; J. L. Allison will head the high temperature insulation department which will be responsible for the sale of insulating brick and other products used in industrial furnaces; L. E. Cover will be manager of the Temlok department, in which will be grouped the fireboard insulation products made by the company for residential and general building construction; H. D. Stewart will be manager of the floor tile department; R. H. Craig will head the acoustical department; and J. C. McCarthy will be manager of the linowall department, which will handle the sales of the company's linoleum-type wall covering.

* * *

Hinde & Dauch Acquires Chicago Plant

Sidney Frohman, president of The Hinde & Dauch Paper Company, Sandusky, Ohio, has announced the acquisition of the property and business heretofore owned and operated by The Evans Fibre Box Company, shipping container manufacturers, located at 3301 West 47th Place, Chicago.

The Hinde & Dauch sales and service office in Chicago housed in the Transportation Building at 608 South Dearborn St. is among the oldest of the company's distribution outlets.

The acquisition of this Chicago property with the thriving local and territorial business it controls will strengthen the company's representation.

The prompt merger of the two offices and of their combined personnel, at the new factory location, will also effect important economies and improve the efficiency of the entire organization.

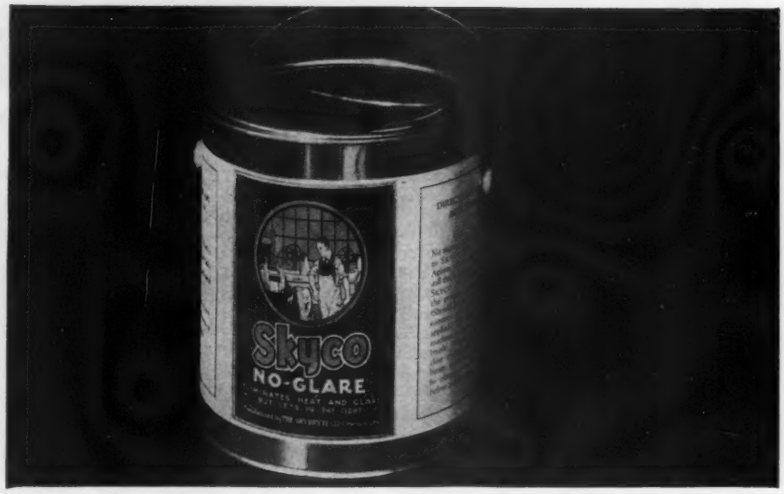
This new addition to its facilities equips Hinde & Dauch with twenty-six mills and factories, covering adequately the entire industrial section of the continent, from Eastern Canada and our own Atlantic Seaboard to Chicago, St. Louis and Kansas City .

The most recent acquisition of metropolitan facilities gives Hinde & Dauch mills and factories including those at Montreal, Boston, New York, Philadelphia, Baltimore and Richmond in the East, Chicago, St. Louis and Kansas City in the West, adequately covering intermediate territory from factories like those located at Buffalo, Cleveland and Sandusky.

* * *

Book on Silent Chain

Link-Belt Co., Indianapolis, Ind., have released a highly pictorial book No. 1425, describing the company's Silverstreak silent chain, illustrating its many types of applications on both long and short center drives.



Liquid Window-Shades

1-2c Per Square Foot!

IF your company has not already solved its window-shade problem with No-Glare, this advertisement is of real importance to you.

No-Glare is a sky-blue liquid for coating factory glass. It eliminates *all* of the glare and admits 94% of the light. It also filters out the actinic rays of the sun and lowers the inside temperature of the building.

When employee efficiency and comfort can be purchased for so little (½c per square foot of glass covered) isn't it a worth-while investment?

For ten years No-Glare has served hundreds of large American industries and saved them many thousands of dollars. It is in no sense of the word an experiment. It is applied easily, is unaffected by rain, yet is easily removed with hot water and a brush.

The coupon is for your convenience. Your order will gladly be accepted on a make-good basis. See the money-back offer contained in the coupon.

Like an Umbrella Over Your Plant

Try NO-GLARE at our Risk

Write or Use Coupon

The SKYBRYTE Co.,
1929 E. 19th St., Cleveland, Ohio.

Gentlemen:

Enclosed find trial order of 1-gallon of SKYCO NO-GLARE at $3.50. It is understood that if we are not satisfied we can ship it back collect and our money will be refunded.

Name of Company.....

Address .....

PERSONAL NOTES
about Men You Know

NELSON N. HARTE has been promoted from assistant superintendent to superintendent of the Merrimack Manufacturing Co., Huntsville, Ala. He succeeds V. W. LOVILL, who has become connected with the Clinton Company, starch manufacturers, as salesman. Mr. Harte, previous to becoming assistant superintendent recently, was overseer of carding. He is a graduate of Wake Forest College and of N. C. State Textile School.

D. G. FLOYD, who has recently been overseer of carding at the Chesnee Mills, Chesnee, S. C., has become overseer of carding at the Merrimack Manufacturing Co., Huntsville, Ala., succeeding Mr. Harte, who is now superintendent.

J. C. HARRIS, JR., superintendent of the Union Bleachery, Greenville, S. C., has been transferred to the New York sales office of the company. C. H. PATRICK has been promoted from assistant superintendent to superintendent succeeding Mr. Harris, and E. H. DOBBINS, formerly overseer of dyeing, succeeds Mr. Patrick as assistant superintendent.

R. L. SAULS, formerly connected with the Whittier Mills Co., Chattahoochee, Ga., is now superintendent of the Carolina Narrow Fabrics Co., Winston-Salem, N. C. S. W. TIMS, formerly of the Southern Weaving Co., Greenville, S. C., is now overseer of weaving at the Carolina Narrow Fabrics Co.

DOUGLAS F. WILLIAMSON, who for the past 13 years has been connected with The Linen Thread Co., at their Blue Mountain, Ala., plant, and who has been superintendent of the plant for the past eight years, resigned his position with the company on March 6. His plans for the future are as yet undecided.

GRADY GILBERT, formerly overseer of weaving at the Darlington Manufacturing Co., Darlington, S. C., has become connected in a sales capacity with the Clinton Company, Clinton, Iowa, starch manufacturers, representing them in North Carolina. V. W. LOVILL, formerly superintendent of the Merrimack Manufacturing Co., Huntsville, Ala., has joined the Clinton Company, and is representing them in Georgia, Alabama and Mississippi.

GEORGE P. MCCLENAGHAN, of Greenville, S. C., has become connected with Hesslein & Company, Inc., with headquarters in Montgomery, Ala. He is immediately associated with H. B. DOWELL, vice-president and general manager. Mr. McClenaghan has been connected as textile engineer with J. E. Sirrine & Company, Engineers, of Greenville. He is a graduate of the Georgia School of Technology, and while at school was elected to membership in the Phi Kappa Phi honorary fraternity. He has been associated with the Sirrine organization since graduation. In his new connection he is the head of Hesslein & Company's technical staff, with the especial duties of co-ordinating manufacturing and selling.

ANTHONY S. TEIBERIS has been appointed general manager of the Columbus Truck and Supply Manufacturing Co., Columbus, Ga., manufacturers of textile trucks, textile dyeing machinery and equipment. Mr. Teiberis has been vice-president and general superintendent of the Master Tool Company, Cleveland, Ohio, where he developed the process of rebuilding all types of portable pneumatic tools to bring them back to their original standard size.

F. A. TOWNSEND, a graduate of the textile school of North Carolina State College, who has been cost accountant at the Sibley Mfg. Company, Augusta, Ga., has been promoted to superintendent of the plant, succeeding P. W. ELLIS.

K. A. BRIDGES has become associated with General Dyestuffs Corp., Charlotte, N. C. He is a native of Griffin, Ga., and was graduated from the textile school of North Carolina State College.

FRANK PITTMAN, JR., formerly of Griffin, Ga., has become superintendent and general manager of the Summerville Cotton Mills, Summerville, Ga., succeeding ROSCOE O. ROBERTS, resigned. Mr. Pittman has recently been superintendent of the Bradford Cotton Mills, Prattville, Ala.

OSBERT C. H. HUGHES, formerly designer at the Ranlo Manufacturing Co., Gastonia, N. C., is now assistant manager of the Penn Tapestry Co., Glen Riddle, Pa.

H. ANTHONY MITCHELL, JR., of Macon, Ga., who has recently been connected with the textile department of W. R. Grace & Co., New York City, has joined the southern sales organization of Staley Sales Corp., representatives of A. E. Staley Manufacturing Co., Decatur, Ill. Mr. Mitchell has, since his graduation in textiles at the Georgia School of Technology, had practical experience in several textile plants. He will represent Staley in the Alabama-Mississippi territory, formerly covered by JOHN A. (DOC) HARRIS, who is being transferred by the company to a Middle Western territory. WILLIAM H. RANDOLPH, JR., is southeastern sales manager for Staley.

J. E. MILLIS, for the past 21 years secretary and treasurer of Adams-Millis Corp., High Point, N. C., has been elected president succeeding the late J. H. ADAMS. Mr. Millis continues also as treasurer.

THOMAS B. MOORE has become superintendent of the High Point Yarn Mills, High Point, N. C.

W. J. HOLDEN has resigned as agent of the Meritas Mills, Columbus, Ga., and will retire from active business, having sailed for a visit to England. C. A. BUTTERWORTH has been promoted from superintendent to succeed him. W. A. PRINCE has been made superintendent, and W. A. HUNT, overseer of carding, succeeds Mr. Prince as assistant superintendent.

JAMES OATES, who has recently been connected with the Dalla-Noval Yarn Mills, Dallas, Ga., has become superintendent of the cotton mill of Juliette Milling Co., Juliette, Ga.

Obituary

FRANK E. HEYMER, one of the best known figures in southern textile manufacturing, passed away at his home in Columbia, S. C., on Monday, April 15, following a week's illness. Mr. Heymer, a former president of the Southern Textile Association, had been in an experience of 30 years superintendent of a number of southern mills, including the Eagle & Phenix Mills, and Bradley Mfg. Co., Columbus, Ga., the Piedmont Cotton Mills, Egan, Ga., and the Martel Mills at Batesburg, S. C. At the time of his death he was assistant manager of the Emergency Relief Administration at Columbia. He is survived by Mrs. Heymer, and two sons.

J. W. JENKINS, for 20 years general superintendent of the Hannah Pickett Mills, Rockingham, N. C., and more recently connected with the Steele's Mills, Rockingham, and the Goldberg Mills, Bessemer City, ended his life at his home in Rockingham, early in April. He was 54 years of age, and is survived by Mrs. Jenkins and one daughter.

J. H. WALTON, vice-president of the Eagle & Phenix Mills, Columbus, Ga., passed away at his winter home in Lake Elbert, Fla., in March, following a heart attack.

J. W. KELLY, who retired as superintendent of the Pelzer Mfg. Co., Pelzer, S. C., some years ago, died suddenly in early April at his home in Anderson, S. C., following a heart attack. He was 59 years of age.

HOWARD P. PARK, who passed away on March 5 at the home of his brother, DR. HENRY P. PARK, in Atlanta, Ga., was widely known in textile manufacturing and merchandising circles. He had retired from active connection with the industry some years ago, due to failing health. A native of LaGrange, Mr. Park graduated from the Georgia School of Technoloiy in 1896, and in 1897 received a degree from Emory University. He immediately entered textile manufacturing, and was the owner of the Park Cotton Mills, LaGrange, for many years; later he was connected with the Bibb Manufacturing Co., and one or two leading merchandising and cotton firms in the industry. He was a past exalted ruler of the Benevolent Protective Order of Elks, and was prominent in Masonic circle. Funeral services were conducted in LaGrange. Mr. Park is survived by Mrs. Park, three daughters, a sister, and two brothers.

CONTINUOUS CREELING

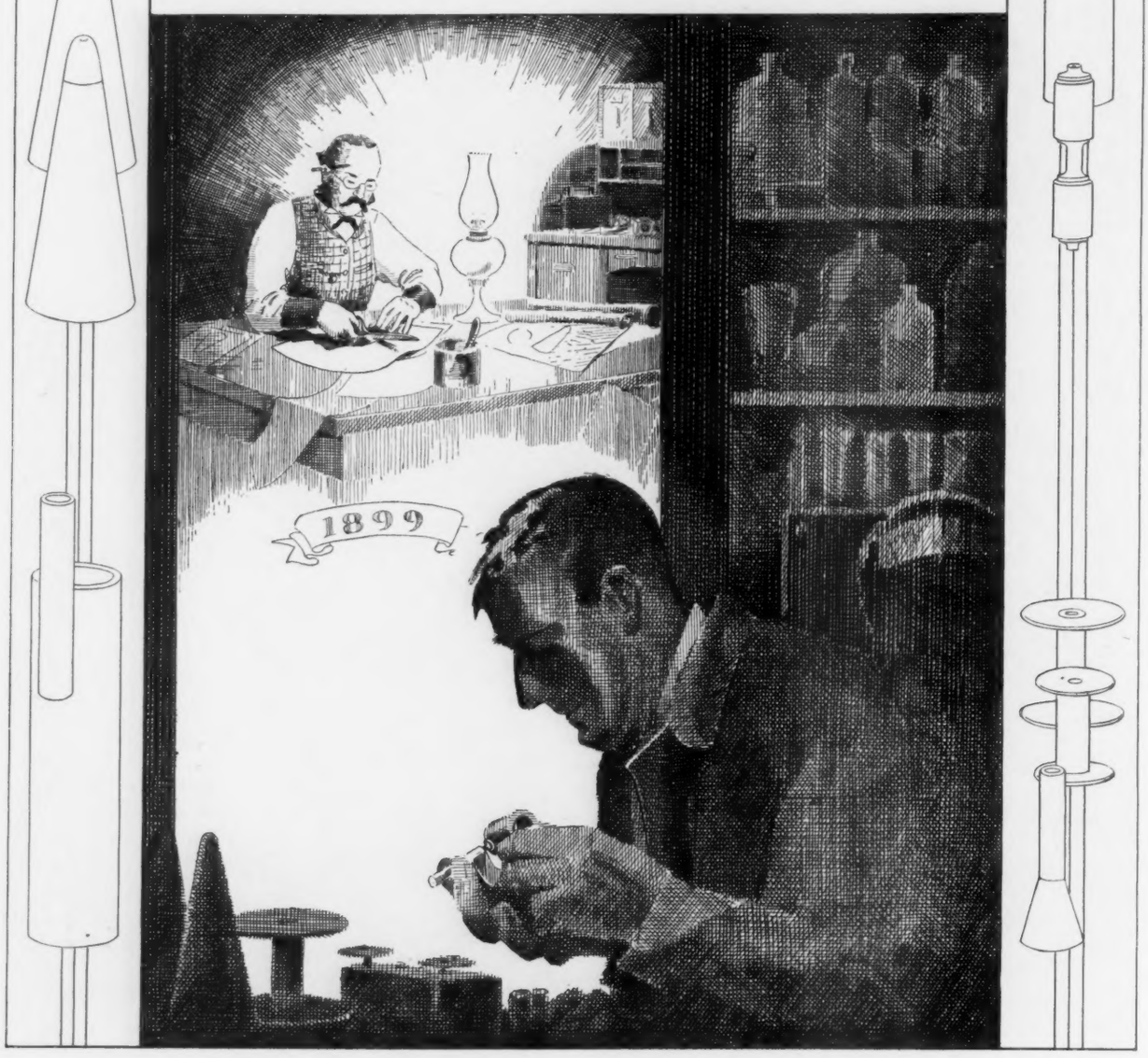
THE HIGH PRODUCTION OF THE SUPER-SPEED WARPER IS DUE TO ITS HIGH WINDING SPEED AND THE FACT THAT IT CAN BE CREELED WHILE IN OPERATION

BARBER-COLMAN SPOOLING AND WARPING

SYSTEM

AUTOMATIC SPOOLERS AND SUPER-SPEED WARPERS
285,000 SPOOLER SPINDLES AND 2,870 WARPERS
HAVE BEEN REPLACED BY THE BARBER-COLMAN SYSTEM

BY KEEPING PACE YESTERDAY
WE ARE KEEPING FAITH TODAY



All research is cumulative in its value—Through the years experiments are made, results recorded, and data compiled until a desired end is attained—We call this "progressive development" in industry, and it rests on a foundation of years of technical research and practical experience.

Since their modest beginning in 1899, SONOCO PRODUCTS have continuously played an aggressive part in the technical progress of the Textile Industry. To keep pace with this progress today, SONOCO has the background of an organization trained to anticipate, rather than await, the requirements of its customers.

HARTSVILLE
S. C.

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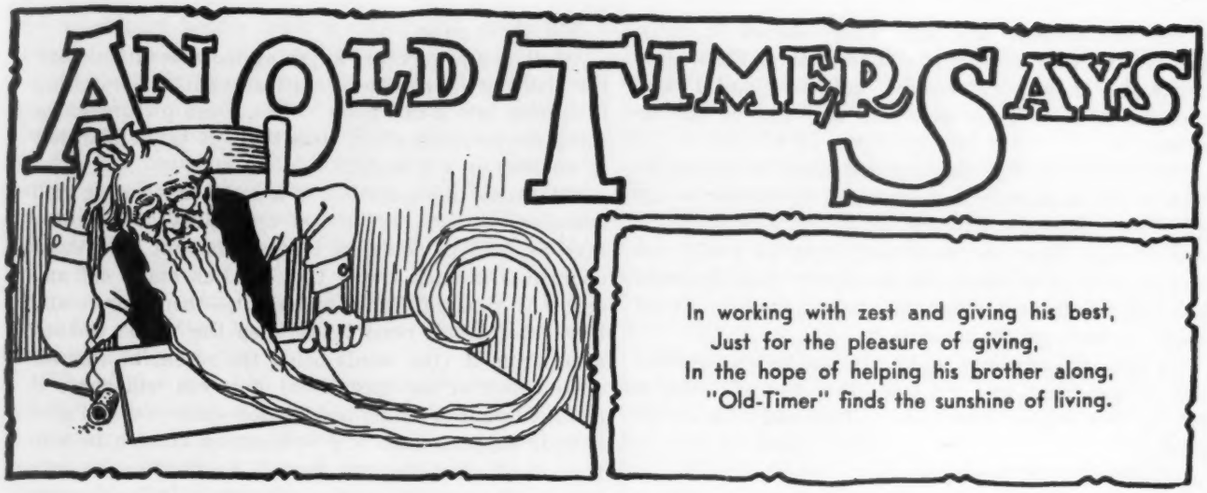
PRODUCTS COMPANY

MYSTIC
CONN.


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Are You This Kind of Artist?

SOMETIME ago I read quite a lengthy article about a great artist, a painter. The article went into much detail to explain how this great artist would travel from country to country hunting for inspiration for the great paintings he put on canvas.

The article explained that these paintings would enthrall even the ordinary layman because they were so very real. And in any of the paintings where animal life was portrayed, that part of the painting seemed to be alive. The more you looked, the more you would see to appreciate and admire. He could make a tree or a shrub so real that you would catch yourself dreaming that you were part of the theme, etc., etc.

Well, fellows, I went to bed thinking about that great man—that great artist. A man who could spread his ideas on canvas so realistically that all who looked at his work marveled at the outstanding personality of the great man as it was depicted by his work.

It was something to think about, to realize that a man could become a part of history simply by being able to spread his thoughts, his brains, on canvas, that all who were fortunate enough to see his work marveled and praised his genius.

Several months later I had the opportunity to see a man take charge of a cotton mill where chaos had reigned for about two years—the mill had failed—passed into the hands of its creditors—and was struggling along, trying to get back on its feet.

Meantime, the operatives at this plant had of course known about the trouble the firm was having and they too had become demoralized—lost all interest in their work—and only those operatives remained who could not find employment with other mills.

When my friend took me through the mill and I saw the deplorable condition it was in, I could not see how in the world any human being could ever hope to bring about any sort of reorganization that would pull the plant out of the rut into which it had fallen.

I really felt that the best procedure would be to close the plant down, let all the people find employment elsewhere, then start in to build up an entirely new organization.

Upon second thought I realized that this was impractical, first, because the plant was a part of the town, so to speak, and the local people, many of whom were former stockholders, felt a certain pride in the home industry.

Then there was a nucleus of the old employees left who called that place home, and not only is a home the dearest thing in the hearts of human beings, but the same reasoning goes on down to dumb animals and in fact all living things.

My father explained something to me when he first took me rabbit hunting. When the dogs jumped the rabbit all the young fellows in the crowd started running after the dogs, and I started too. Father whistled to me and I saw he was standing still. He motioned to me to return to him and said, "Son, that rabbit jumped up right over there. Now we will stand here, and after the dogs run him for awhile he will return pretty soon close to where he jumped up." A few minutes later, Father's gun rang out and he told me to go get the rabbit.

And I know you have often heard of the man who left Stubenville or some town or county and went out to make his fortune, but when he began to get old he would return to his home town or close to where he spent his boyhood days.

Such is human nature—but let's get back to our disorganized mill that my friend took charge of. He rolled up his sleeves and waded into the work like it was the first job he had ever had. (Remember that OLD-TIMER article about a fellow's first job?) I watched him as he would plan a way to do this or that—how he would study the reaction of the operatives to decide how he would make the next move. Many of the ways he would go about getting the operatives to respond seemed amateurish to me; but after a few weeks of his leading (not driving) I could see a different attitude on the part of operatives, over-

seers, section men and all. They seemed to rally around him with a spirit of co-operation and the work began to show improvement quicker than I had thought it possible for one man to begin to get results.

He didn't seem to pay any attention to the condition of the machinery and explained in answer to my question about this that the people were in so much worse shape than the machinery that he would not have time to think about the machinery until he could get the people organized once more; then he would begin to work on the machinery.

I ran into him one night just as he was coming out of the plant and we went into the office for a smoke. He flopped down into a chair and with a sigh said,

Gosh! how tired I am!

Yes, I replied, but your face does not look tired; in fact you look rather happy to me.

That's just it, he said. I am happy.

Well, for goodness sake, let me in on the secret. Here you are working more hours than I've seen you work in years, in an old worn out mill that couldn't make a dollar if it had the dies out of the mint in Washington, to make dollars with, and you say you are happy—

Wait a minute, he said, and let me give you a thought you probably have never had in regard to the work of an overseer or superintendent in a cotton mill. I claim that it is the most beautiful work in the world. I claim an overseer or superintendent of a cotton mill has more authority than the president of the United States. He (the president) cannot even fire a man without taking the matter up with a whole bunch of politicians—he can't get anything done without begging and petting or pulling the strings in some way—

Wait a minute! Are you sure you are feeling all right? You haven't got the flu or anything that would cause you to be talking out of your head, have you?

No! No! I am perfectly sane, I assure you, but maybe I did start off on rather a high plane to explain myself—

I'll say you did when you said that an overseer or superintendent has more authority than the president of the United States.

Never mind, OLD-TIMER. I'll go at you in another way. Now listen:

A man plants a seed in the ground, and when it sprouts, breaks the crust and sticks its tiny head out of the earth and into the sunlight—the man begins to cultivate it—keeps the weeds from around it—he stirs the ground to give it air and moisture—he watches it tenderly as it grows and guards it carefully until it bears fruit. Then he selects the choicest of the grains and plants them again.

Following the same procedure in the cultivation and care he finally produces a fruit or grain that far surpasses that he started with—

Sure, I understand that, but it sounds like farming to me—

Will you please shut up, OLD-TIMER, and let me finish? You promised to listen, you know.

Oh, sure, go on.

Well, can you picture anything more beautiful than the planting of that seed—cultivating it and watching it develop into a fine plant? Yes, I can picture something far more beautiful than that—it is the planting of an idea or a thought.

To study the operation of a room in a cotton mill composed of 50, 100 or 200 operatives as the case may be, and to plant an idea or thought into those operatives in such a way that you can stand off and see that thought begin to sprout,—then grow—and how careful you must be to keep the weeds cleaned away from it (the weeds being the resentful attitude on the part of the operatives) how you will nurse it along when it is young and tender—how you will give it your support until it grows strong enough to support itself, then you can leave it to grow on its own because it is no longer *your* thought. It has become *their* thought—the overseer—the section man—the operative—yes, it is truly *their* thought and you can watch it bear fruit—fruit that means greater efficiency—more money in the operatives' pockets—more production for the firm—a fair return on the investors' money—everybody happy . . . Can't you see now, OLD-TIMER, why I am happy?

Yeah, I guess so.

But gosh, you seem to be pretty tired too.

That's O. K. with me as long as I can do creative work—work with the most difficult, the most fickle thing a human being comes in contact with, and by that I mean human nature. Then I am happy and being tired physically only adds to the feeling of having accomplished something worthwhile.

And when I refer to human nature as fickle, I mean just that. In fact, human nature is the most complicated study we have and at the same time the most simple. That is seemingly a contradictory statement, I'll admit, but if you will look up your past issues of COTTON you will find an OLD-TIMER article in which it is fully explained from that standpoint.

You know that the Bible commands us to return good for evil, but that is an impossibility from a "law of nature" standpoint. What I mean to say is that a human being can return good for evil because a human being has a mind that can control the laws of nature (control the body) and that mind can *make* you return good for evil—but a dumb animal which is only controlled by the laws of nature certainly cannot return good for evil.

If you doubt that statement just try stepping on a cat's tail and see whether it will purr at you or scratch you.

Of course a human being will fall into habits caused by the animal that is in us—habits such as laziness—lack of interest in our jobs—coupled with carelessness and wastefulness—but that is where the human brain or mind comes in, and that is why you have got to "make a man make money for himself".

That is another rather strange statement, I'll admit. It too is a seemingly contradictory statement, but if space would permit me, I am confident that I could convince you that it is a fact. Just one little illustration: Take the mill we are talking about. The weavers, spinners, fly frame hands, etc., in that mill

are intelligent people from a cotton mill standpoint. That is, they know that the better they run their machines the more money they will make. They are being paid by the piece. They know when they produce seconds it reduces their pay. They know when they let three or four looms stand with only one thread out while they work on another loom that has several threads out, that they are losing money. The fixer knows when he puts in a shuttle and just makes the loom run instead of taking time to adjust that loom properly, he is going to have another flag on that loom in a few days that he would not have had if he had done the job properly.

The slasher man, the tying-in man, the beamer and all the others know that when they handle the warps carelessly, causing the operative at the next process to wind off several rounds of yarn in an effort to get the warps straight—they are causing excessive waste that will kill any small margin of profit the mill might have in the sale of the goods.

The inspector or grader knows when she whacks off a quarter of a yard of cloth more than necessary when she is cutting out a bad place—she knows she would not throw that quarter of a yard away if the cloth belonged to her—

Well, why in common sense do they do these things when they know they are taking money out of their own pockets?

But I will not go into detail in an effort to explain—but you know that it is just the way all operatives will do unless they have an overseer or superintendent who will

make them make money for themselves

If that isn't a strange freak of human nature, then I am a good aviator or something.

There are also many other things that you must make operatives do for their own benefit that many times a young overseer or superintendent feels is almost an imposition on the operative. Still we older overseers and superintendents know from long experience that these things have to be done or soon you will have no discipline, your production will go down, your seconds will be out of sight, and eventually you will be listed in the textile papers as "resigned".

You have raised or are raising some children. Have you a child who likes to take castor oil or a pill or any other medicine? No, certainly not, but still you have to *make* that child take the pill or castor oil. Why do you do it? Is it because you hate your child and want to do something mean to it simply because you have the authority to do so? Certainly not. And the child is often not only resentful when you make it take a pill, but it thinks Daddy is awfully mean to make it take the nasty old pill or castor oil.

Simple reasoning, you will say. Anybody knows those things.

O. K., then apply the same reasoning to your operatives. You have got to *make* them do things that they resent and think you are mean and overbearing just like the child thought when you made it take the pill. You made the child take the medicine because you knew it was best for the child. Likewise you are compelled to make operatives do certain things because you know from experience those things are best for the operatives.

To go on with this simple reasoning is not necessary, still it explains the strange freaks of human nature and justifies my statement that human nature is one of the most complicated studies we have and at the same time the most simple. Simple if you will and can put yourself in the other fellow's place and then use just plain old everyday common sense.

Now about that wonderful artist I read about. A great man, yes—a man who went down in history because he was a genius—he was born with a particular gift most of his fellow men do not possess.

Then I claim that the overseer or superintendent who is born with the ordinary brain that most of us are born with, but by the diligent application of that brain to the study of the laws of nature that are about us every day and then to the higher study of human nature to the point where he can plant his thoughts, his ideas into the brains of his fellow workers and see these ideas grow and bear fruit like the farmer who plants a seed in the ground—then, to my mind, fellows, that overseer or superintendent is an artist—yes, a far greater artist than the man who could only put his thoughts on canvas.

A rather strange fact: Great fortunes are not made by the men who have capital, but the great fortunes have been built up by men of brains; men who purchased the use of capital and then with their brains built up great industries.

Rockefeller, Ford, Firestone, Edison—these are men we all know of, but there are also just as outstanding achievements in the textile industry, such as Smythe, Montgomery, Springs, Hammett, Cannon, Elsas, Comer, etc.

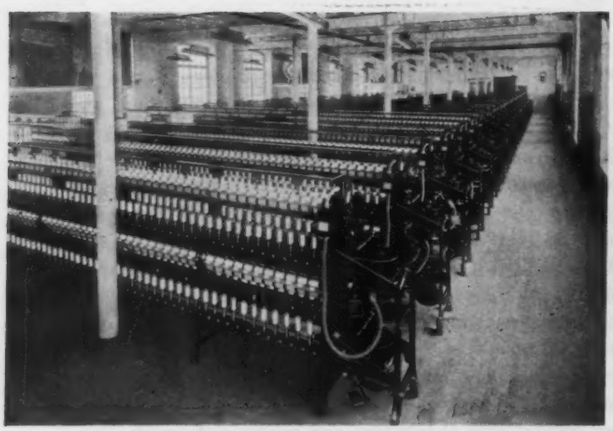
And another rather strange fact is, that capital is about the cheapest thing you can buy. At the present time I understand that business men can buy the use of capital for as low a price as 3 per cent.

* * *

The average overseer and superintendent seems to think that if he could only secure a job at a certain mill he knows of he could sure make a "rep" for himself. What about the mill where you are working, brother? Old Man Opportunity is right there, and you can find him if you will try hard enough.

* * *

"All things come to him who waits" is an old proverb, but partner, it will not do for you and me, in this day and time. If we expect things to come to us, we cannot "wait". We must "hustle"; think up new ideas, new and better ways to do things, ways to enable operatives to turn out more pounds with no more expenditure of energy, ways to use less dollars and still get as many pounds, ways to make machines operate with less stoppage and with less supplies. The man who "waits," in these times, is likely to soon be "waiting" for a job.



U. S. ACME TWISTERS

IF—you manufacture rayon
—you throw silk or rayon

. . . the following features of the ACME TWISTER will be of definite interest . . .

1. Uniform tension and smooth, even speed insure better yarn and package.
2. Decks can be operated separately and are offset for better working space and visibility.
3. Twist gears are quickly and easily changed.
4. Stroke is steady with cut cam and perfected traverse.
5. Rigid construction and accurate balance give precise operation with minimum vibration.
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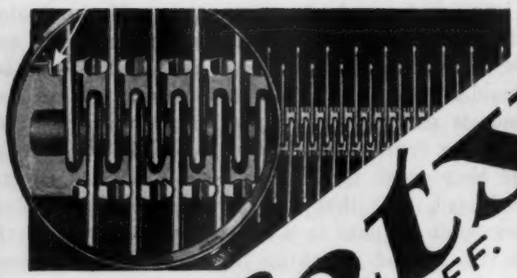

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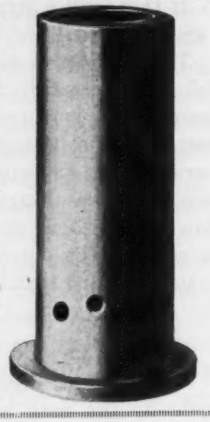

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◆ ◆

Setting The Magazine and Sliding Bar Warp Stop Motion on Stafford Looms

An outline of interest to those mills operating this type of equipment . . . . . .

EDITOR COTTON:

I thought it might be of interest to some of your readers to discuss the methods we have found best for setting the magazine and the sliding bar warp stop motion on Stafford shuttle changing looms. If any readers operating these looms would care to contribute further to the subject I am sure it would be interesting for all.

First, as to the setting of the magazine. The magazine should be taken off of the loom until the conveyor top has been set. To set the conveyor top, have the conveyor lever in place and see that the roller on the conveyor cam is not worn flat sided, but that it turns freely on its stud. Now place the conveyor top—that is, the part that carries the shuttle from the magazine to the box—on the lever and throw in the change clutch so that the change mechanism will operate. Turn the loom pulley by hand until the conveyor moves forward into the shuttle box. Either raising or lowering of the top may be necessary to make it enter the box properly. The top should not be tilted forward or backward to make it enter the box, but should be about level all of the time; if the conveyor top is tilted backward so that the end of the fingers enter the box when the conveyor is on its full forward throw, the ends of the fingers will hold the shuttle up off of the lay end bottom, and this must not be. But the conveyor fingers should move flat on the lay end bottom when placing the shuttle, so that the shuttle will be placed as low in the box as possible.

The front board lifting rod should not lift the front board more than is necessary for the outgoing shuttle to be ejected and the new shuttle placed. The lifting rod has a turn-buckle to either lengthen or shorten the rod. If the rod is too short, it will put too much strain on the lifting lever; also the ejector will be forced in too far. Get the front board set and be sure the ejector enters the back of the box without binding against the binder or the bottom of the box. There is a set screw in the ejector by which the stroke is adjusted.

Now, turn the loom pulley until the change mechanism clutch is thrown out and the conveyor is at rest at its place under the magazine. Then put on the magazine—set it absolutely straight up and down; do not lean either way.

Place a set of shuttles in the magazine and set the magazine just high enough for the bottom shuttle to drop on the conveyor top and the magazine gate to pass back under the next bottom shuttle. If the magazine is too high, the shuttle in being conveyed forward will drag its top edge against the bottom of the magazine and interrupt the free movement necessary. If the magazine is too low, the gate cannot get back under the next shuttle in the bottom of the magazine and therefore will cause the next shuttle to be dropped.

When the magazine is placed on the loom straight as outlined, the conveyor may not move back far enough to drop another shuttle out of the magazine; in this case, there is a roller on the conveyor cam that is adjustable and this roller should be loosened and the conveyor lever pulled back to the proper place; that is, so that the tail on the magazine gate just rests against the back of the conveyor top. While holding the conveyor lever in this position, tighten the stud on which the conveyor roller runs. Never use grease on the conveyor cam or roller. Oil the roller with good oil about once a week and keep the cam clean of lint for good results.

To set the sliding bar warp stop motion, divide the stroke equally with the driving rod so that the spring give-way will not be moving too far up or down. With the drive rod set as mentioned, divide the stroke on the sliding bars so that they move the same distance in each direction. Set the link that lifts the knock-off hook so that it lifts the knock-off hook the same on both forward and backward strokes. If the hook is too high or too low, move the collar that lifts it until it just clears the knock-off when the loom is running and the stop motion is moving freely in both directions.

Now, if the loom does not stop in the desired position, the way to time the warp stop is as follows: Start up the loom and stop it by the warp stop. Now, no matter what position the loom stopped in when stopped off by the warp stop motion, do not move it, but loosen the driving gear of the warp stop motion and hold the warp stop motion in the same position that it was in when the loom stopped off. While hold-

ing the warp stop motion "as is", turn the loom to the exact position that you want it to stop in, and then tighten the stop motion drive gear.

CONTRIBUTOR NO. 6356.

Change in Card Doffer Drive

If your cards are driven as this man's were, this article will show you how to change the drive, as he did, if you wish . . . . . .

EDITOR COTTON:

I would like to describe for you something which we have found to be beneficial in connection with driving one particular make of card that we have in our mill. This particular type of card has the arrangement shown in Fig. 1 for driving the doffer. Pulley *A* drives the gear *B* mounted on the same stud, *C*; gear *B* drives the production change gear *E*, through gear *G* which is mounted on stud *F* with gear *E*. The change gear *E* drives the large doffer gear *G*. This drive requires one pulley, three gears and two studs. The pulley has a hub on which gear *B* is mounted and kept from turning by a pin; gear *D* also has a hub on which gear *E* is mounted in a similar manner. After several years of use these gears are a fairly constant source of trouble as they are continually rattling and the holes for the pins become oversize due to wear and strain. New pins are required occasionally and often new holes have to be bored at a different point to take out the play in the drive.

To overcome the difficulties found in this drive, it can be changed to the method shown in Fig. 2. This method uses only one pulley and one gear and although some cost is required in the change-over it will give complete satisfaction and end all trouble at this source. The first step is to remove the present set-up completely, including the arm on which the assembly is placed. The hub on the end of the arm is cut off at *A*. This piece is saved and placed back on the bolt that holds the arm to the frame of the card at *B*. This is necessary to make the new assembly line up with the doffer gear. Keep in mind that the arm is turned over before re-mounting and do not cut off the wrong side. The stud *E*, details of which are shown, is mounted in the place of stud *F*, Fig. 1. The detail illustration in Fig. 2A should make the construction of this stud clear. The threaded end is just long enough to reach through the arm and have room for a nut to hold it in place. The collar is to keep it from going into the hole and also, most important, to make the stud rigid and keep it in line. This collar should be part of the stud and not made separately. There should also be a square shoulder just back of the collar to keep the stud from turning. The oil hole is drilled through the center of the stud down half way of the portion on which the pulley is to run. A hole is drilled from one side to meet this hole already drilled so as to make a passage for the oil to the bearing surface. Another hole is drilled from the opposite side to meet the first one at the end of the stud. Then the end of the first hole is plugged up. The collar shown goes on the end of the stud to hold the pulley in place. This too should be bored for an oil hole, so that when assembled oil placed in the oil hole of the collar will run through it down through the stud and out on the bearing surface.

The pulley should be 15 inches in diameter, crowned, with a 2-inch face. The hub should be as long as the thickness of the production gears, bored 1-inch for stud *E*. The hub should be 1⅝-inch in diameter and have a 5/16-inch keyway cut in it. You will note that it is necessary to re-bore the production gears and have a similar keyway cut in them.

With the stud in place, the arm is re-mounted on the card and the pulley and gear mounted on it.

The next step is to mount the pulley, Fig. 3, in place of the licker-in pulley in use. This pulley is 3 inches in diameter, crowned and flanged, with a 2-inch face, and has a hub 3½ inches long. This hub should

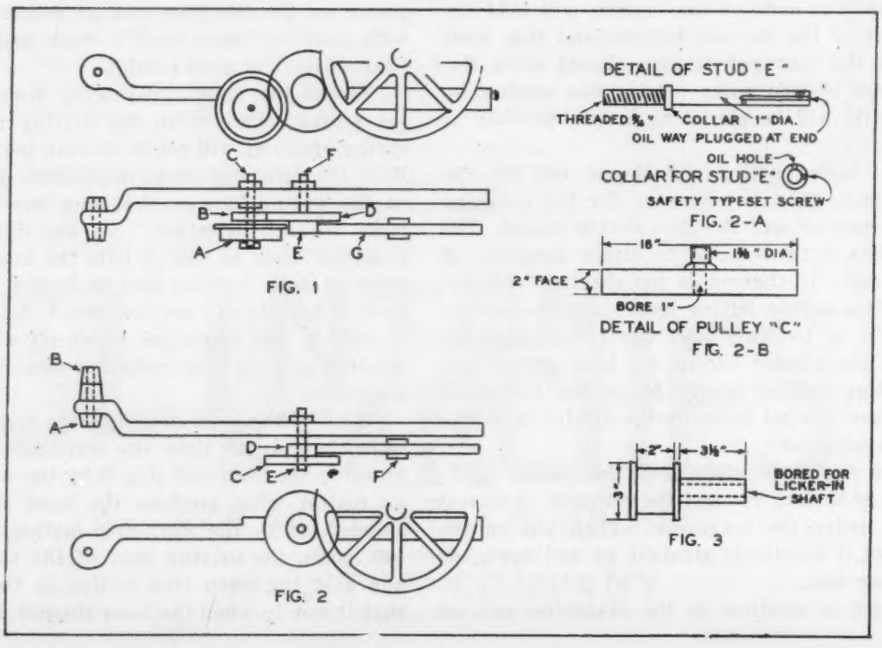


FIG. 1

FIG. 2-A

DETAIL OF PULLEY "C"

FIG. 2-B

FIG. 2

FIG. 3

be 1 inch larger in diameter than the licker-in shaft and bored to permit slipping it on the shaft. It is held in place with two ½-inch safety type set screws, which are tightened on flats filed on the shaft.

When this pulley is in place, put on a crossed belt and the new assembly is ready to run. It will run quietly and is as trouble free as any other part of the card. It will greatly reduce the stock of gears necessary to carry for replacements and has no pins to give trouble. There is only one adjustment to be made on it and it is simple and almost fool-proof. The new production constant can be easily figured as well as the correct production gear to use in any particular case.

CONTRIBUTOR NO. 6184.

Points on Weaving Seersucker

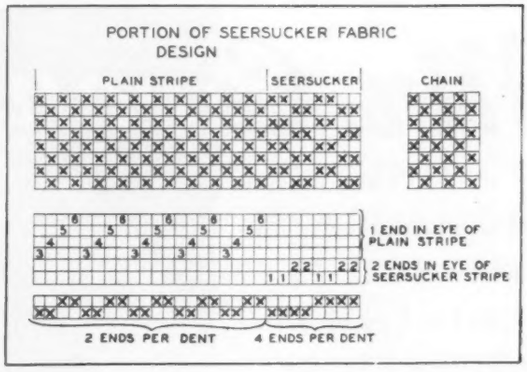
RECENTLY a subscriber submitted a problem with reference to seersucker weaving which may be summarized as follows: The whole trouble is that the ends from the *top beam* loosen up and the threads stick together. We use four banks of drop wires, and six harnesses. The *bottom beam* is drawn two ends in one dent, but the *top beam* for crinkles is drawn four ends in one dent. In the ends in No. 5 and No. 6 harness, there are two threads drawn separately in the heddles in the No. 5 harness, and two more in No. 6 harness, one end in one eye. This is a 36-inch crinkle seersucker, with a 32.50 dent reed, and the width in the reed is 39.00 inches. The total ends are 3,248. The warp yarn and filling are both 50s/1 combed.

This problem, with a sample of the fabric in question, was submitted to Mr. Ivar Moberg (the author of our recent series on Loom Fixing) and he has replied as follows:

In reply to the inquiry with reference to weaving seersucker gingham check, I would say that the seersucker ends from the top beam should be drawn in on harnesses No. 1 and No. 2 instead of No. 5 and No. 6. Harnesses No. 1 and No. 2 are of course those nearest to the reed. This is necessary in order to give the seersucker ends a clear and open shed. We know that the nearer the harnesses are to the reed the clearer and more open shed we get. The seersucker ends, with very little tension on them, have a great tendency to sag and stick together. It is therefore imperative that we draw these ends on harnesses No. 1 and No. 2, which are nearest the reed.

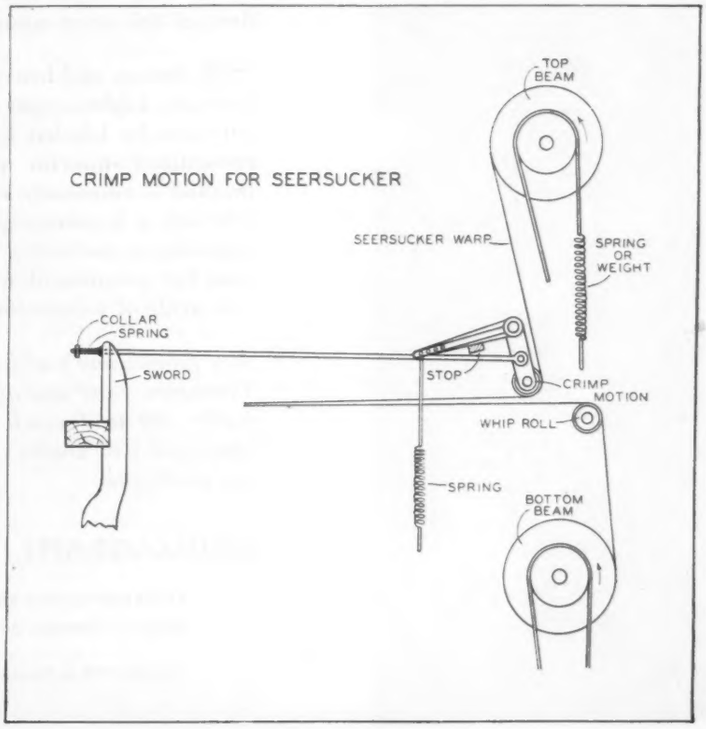
I would also recommend that the two seersucker ends weaving together be drawn in one eye instead of separately in two eyes on the same harness. In this way we reduce the friction on the ends of the seersucker stripe and a more even and prominent crimp will be obtained. I am enclosing a portion of a typical design for seersucker to show how the drawing-in should be done.

The yarn from the seersucker top beam must always pull the beam in a direction away from the spring, or weight, on the friction chain and never from the dead point of the chain. (See sketch.)



To produce an even and prominent seersucker, or crimp, we must use a seersucker, or crimp motion. This can be purchased from the loom builders, but it is very simple to make where a mill has the necessary mechanical facilities. It consists of an easing bar under which the seersucker warp runs. This easing bar is connected with the lay sword, or reed cap, in such a manner that it will be pulled forward as the reed beats up the filling. (See sketch.) This will slacken the seersucker ends at the time of filling beat-up and an even and prominent crimp will result. Some mills use cams on the crank shaft to operate the crimp bar. In other mills, they are using leather straps attached to the lay sword to operate the easing or crimp bar. This, however, is not good practice, as the leather will stretch and the straps must be adjusted from time to time.

Another very important point in producing good seersucker is to have the warp ends, both from the top and from the bottom beam, going into the drop wires perfectly straight. The distance between the



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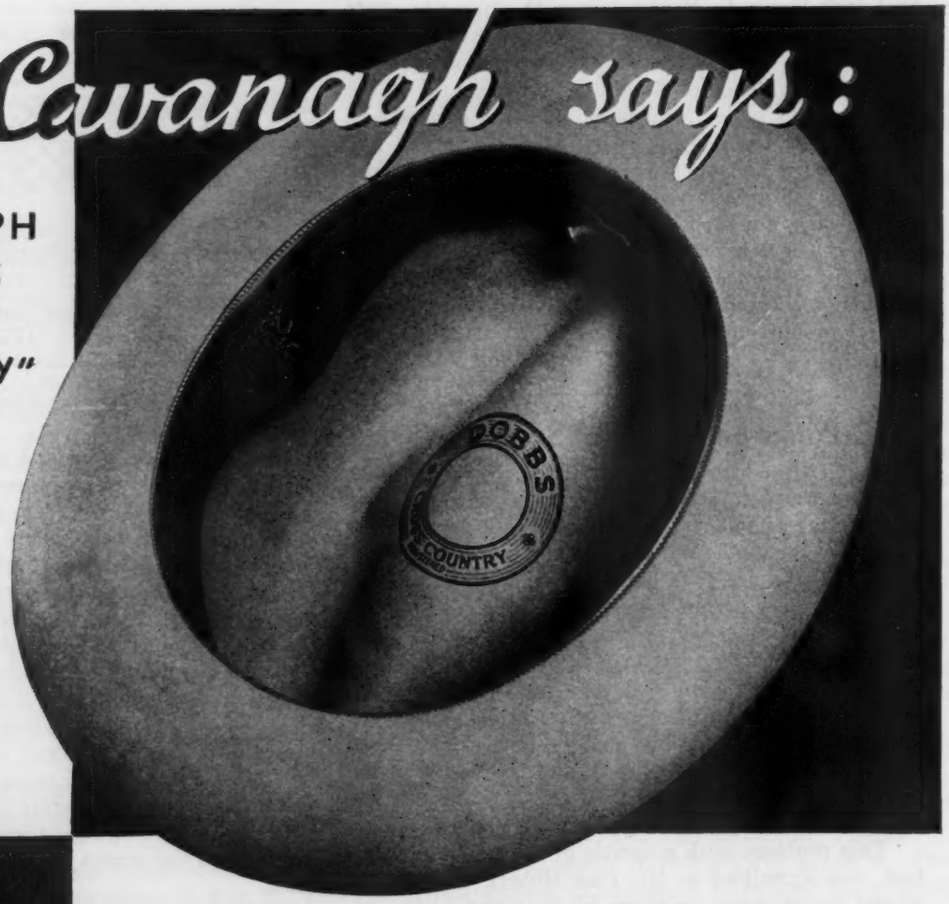

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beam heads on the bottom beam must be exactly that of the spread of the warp in the reed. The top beam must be the width of the selvages narrower. In the drawing-in, or tying-in, we must see to it that the warp ends are not crossed in the least, for this makes successful weaving of seersucker almost impossible.

Harness No. 1 and No. 2 in which the seersucker ends are drawn should lift about one-half inch higher than the harness in which the ground ends are drawn. If the looms have a dobby or head motion this can be achieved simply by placing the stirrups higher up on the jacks. If the looms have under-cams, we cannot increase the lift very well, but we can see to it that the stirrups are in the first notches on the treadles and make the shed as large as we can.

In weaving seersucker, it is also advisable to use very light drop wires, especially on the seersucker or crimp threads, as these threads are run under very little tension. If we have a warp stop motion that can be timed independent of the other movements of the loom, it should be timed so that the indicating movement will take place while the shed is fully opened and the drop wires are riding high. Otherwise, the drop wires will be riding so low due to insufficient tension on the seersucker ends, that they will have a tendency to stop the loom without any threads being broken.

In the sample submitted by the inquirer, the take-up in the seersucker stripe is about 20 per cent. The usual take-up in seersucker is between 25 and 50 per cent, so it seems to the writer that the crimp would not be prominent enough for acceptance in the trade.

Stressing the Importance of "Little Things"

EDITOR COTTON:

Recently I heard a remark made by an old, experienced mill man, who, by the way, is used to dealing with the bigger things in the textile industry, but on this occasion he was giving a little advice all around, and he laid great stress upon an old adage, namely, "It is the little things that count." I, for one, was greatly impressed, and being so, naturally thought of the numerous little things that count in successfully running a cotton spinning mill.

In most instances the help do not seem to realize, and also in many cases are not given to understand by their superiors, the value of that eternal truth. Now it is my intention, as far as it is in my power, to discuss several of these little things which would count toward success and smooth running if they were attended to and supervised in the strictest possible way, which should, at the present time, be demanded more than ever before.

First, let us take as one example, the supervision of waste—not the control of the amount of waste made by each operative; that will come later—but take, for instance, where various grades of stock and lengths of staple are run: Is this waste from cards, drawings, combers, speeders, etc., being kept separate according to the respective work? And, not only that—and this next point is the most important—but where it is returned to the opening room or bin mixings, is it placed and run with the certain individual grade to which it originally belonged or is it thrown into any bin or mix, irrespective of grade or staple?

Needless to say, this latter abuse will occur from most careless help if there is no system adopted to check it. There is just a little thing which will bring about serious results in the resultant yarn, by proving its deficiency by producing cockled yarn.

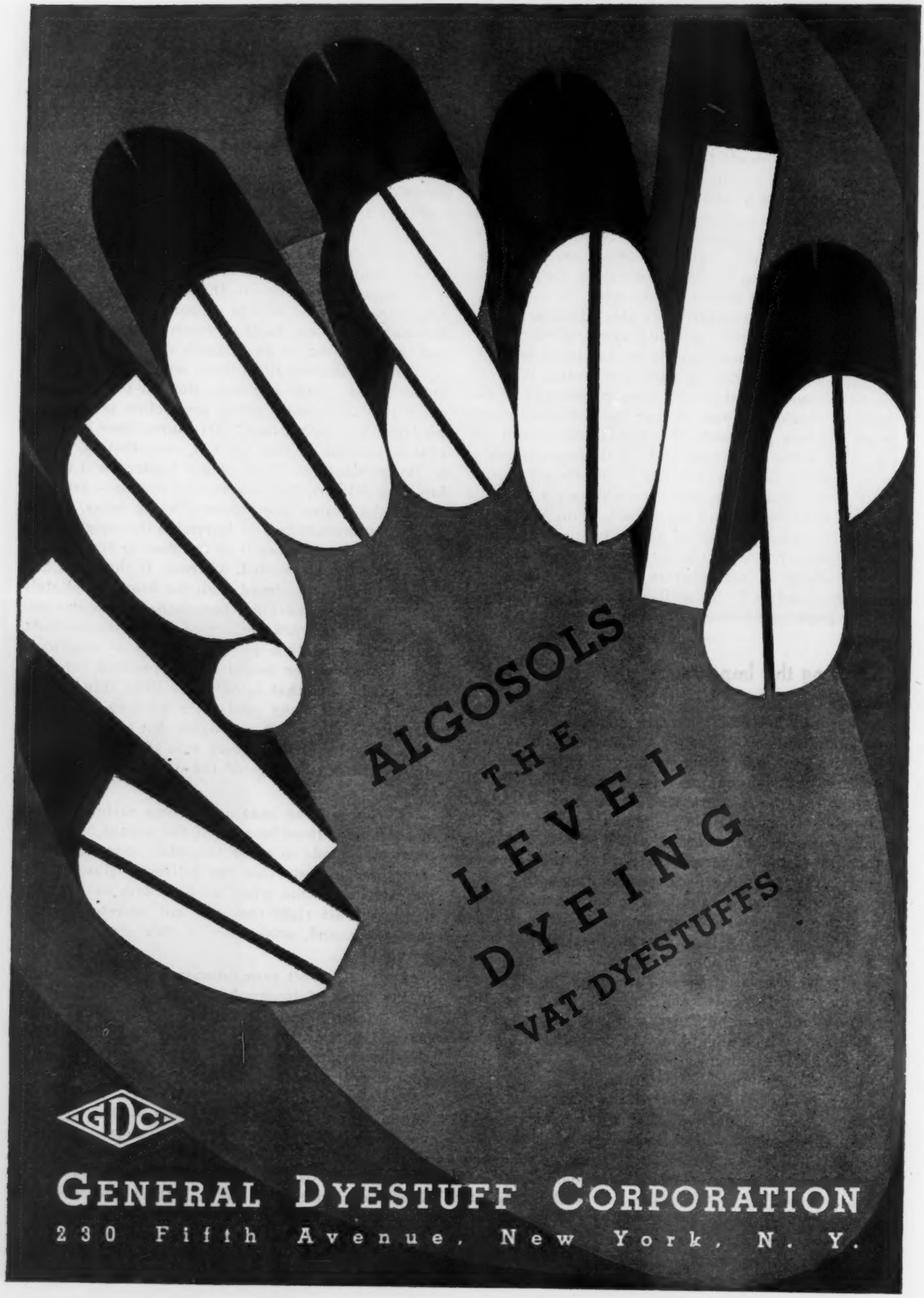
The writer has sure proof of an occurrence of this kind and therefore advocates the strictest supervision of both the amount of waste made by each operative running any machine or machines and also a careful watch on the opening room.

A good system to adopt is to make every section hand responsible for all waste made, also the return to the respective grades in the opening department. The help, of course, will be responsible to their section hands, who can have a system of various marks and the weighing of waste made daily.

There is another little thing which counts in the picker room. Have you ever stopped to think how much loss in finished picker production is made by tenders when doffing laps? Of course there is a natural inclination to ease up, but, nevertheless, a loss of lap production. Most picker tenders will doff a lap—the delivery part stopped, of course—carry the lap to the scales (sometimes), weigh same, which means a minute or two to determine the weight, then remove the lap to place it on the floor or truck. Now think of the time wasted, whereas, if that man had doffed the lap and placed it on the floor immediately in front of the machine, and then started the machine and afterward performed all of the motions, causing loss of time and production as aforementioned, that picker would have produced three or four yards, and that is only one little thing which entails a great many yards in a working week with very little extra effort or trouble, not to mention the extra weight which is blown onto the screen during any length of stoppage of the delivery being eliminated.

Of course I can imagine someone saying that the picker tender must be sure of the weight of the lap previously made in order to correct same if it is in error before re-starting the delivery. However, let me state here that when good pickers are fed correctly and set right they will not vary to extremes very often, and, production in these days of economy counts.

Do you correct your finisher picker men who are in the habit of incorrectly starting the end of the sheet of lap around the lap pin or slip roll? How many, I wonder, take hold of the extreme end of the sheet and lap it around the pin evenly instead of doubling it up or making a slack start? What happens to the foot or so of lap? It is uneven, we know, and of course the card stripper knows that he should not let it go by or even try to straighten it out, but no, he must rip that piece off when his laps are running out, and back it goes to the opening room. But, when laps are started right, as they should be and can be easily, the amount of waste is considerably decreased from this source, providing of course that strippers are warned against making unnecessary waste of laps. Overcoming the problem of too much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waste is only a little thing when taken in hand by a strict supervisor, and once the operatives are convinced that this matter is as important as making their week's wages, the problem will be simple to solve.

As an observer in some carding departments, the writer has had the opportunity to notice several little things which grinders do not consider amount to much; for instance, a grinder was replacing some emery fillet on a traverse grinding roll and surprised the observer greatly by displaying his skill at being able to cover the roll by hand, namely, by simply lapping the fillet from clip to clip tightly of course, as tight as he thought it should be, anyway, and then claiming that he had now a perfect grinding surface. However, the grinder could not be blamed because he did not have any better facilities for the job, and this is the case in numbers of card rooms.

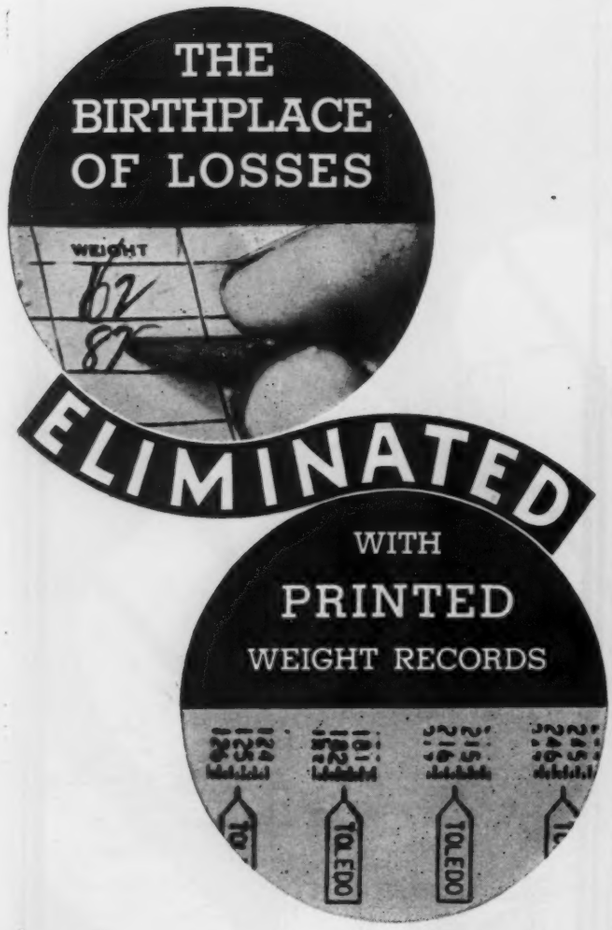
Clothing any roll by that primitive method is nothing short of ignorance, because unless the proper tension is applied evenly all around and the roll is properly balanced, how can a 100 per cent grinding surface be acquired? As a matter of fact, some carders are using emery fillet which resembles sandpaper, not the standard grooved emery fillet, and then expect 100 per cent grinding efficiency. However, here is the "little thing" in this case: Why not have a bench erected with a couple of bearings at each end and three tension bars fitted across so that rolls could be covered evenly? In a previous issue of COTTON the writer furnished a sketch of this arrangement, and will gladly forward it to any reader who is interested.

Are your strippers properly instructed regarding the proper method of stripping? This is a little thing which one contributor mentioned in an article in a previous issue, namely, cutting the feed before stripping, but the writer proceeds a step further, and advocates that in addition to disengaging the feed, the doffer should not be stopped. As the stripper cuts the feed he should go to the opposite side of the card and disengage the calender roll gearing by the handle provided, thus allowing the waste from the trailing web to fall to the floor, leaving the card practically free of good stock. After breaking off the surplus and piecing up after stripping, this waste should be picked up and collected as stripping is in progress. Very little trouble, but a great saving in pounds of good fiber from the stripping waste.

The reason for the suggestion of not stopping the doffer in the first place is to discourage the practice of some strippers who turn the doffer by hand to speed up stripping, and of course, by so doing, they allow good fiber to go into the stripping waste. Surely a great saving can be made if this little fault is checked.

When grinding cards are the grinders cleaning out all oil holes on cards and supplying oil where it is required; and, more important, are they checking all of the meshing of gears, particularly the feed roll gearing and the feed roll itself, which should turn very easily?

It is possible, and very probable, for draft gears or the feed roll plate gear to create uneven sliver



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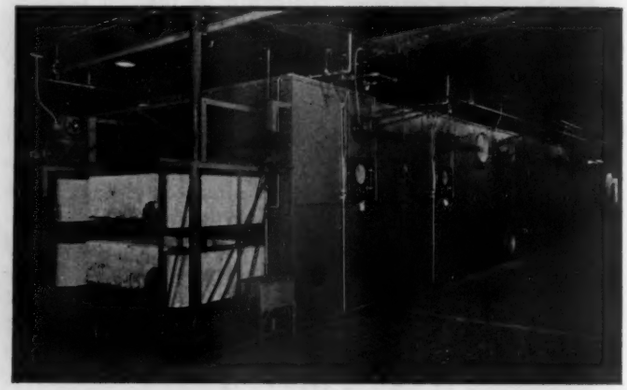

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by a gradual skipping occasionally if not properly meshed and tightened on their respective shafts; and, more often than not, this defect goes on unnoticed until finally the feed stops. But imagine the amount of bad work—single—which has gone by, whereas, if a constant overhauling of this condition were practiced by grinders, such defects could very easily be avoided.

Forewarned should be forearmed in this instance, and it only takes a few minutes to inspect these gears; a little thing saving endless trouble, and one which can be best checked when a card is stopped as for grinding. Coiler gears too are placed in this category and should of course receive the same attention.

There are numerous little things in connection with the successful operation of carding sections. The frequent cleaning of card fronts, keeping feed roll clearers clean and the proper method of renewing laps. Regarding the latter point, the writer insists upon strippers, when setting down new laps, ascertaining, first of all whether or not the lap is a perfectly straight fringe, and as the old lap is almost running out, pulling off any ragged edges and creating a similar straight edge. Then when the two edges are joined with an inch or so of a lap there will be a correct piecing, therefore eliminating trouble and especially heavy sliver.

As an observer of these things the writer has noticed some very haphazard methods of changing laps, namely, because the person changing did not know, or did not care, about the damage being done, as very little check had been administered.

Now we have a drawing tender changing cans, maybe a full set, or perhaps only have the frame, and what happened? He or she has of course broken off the ends of the preceding cans of sliver and proceeds to piece the new slivers to the latter, having practically all those piecings together and these will draft together and undoubtedly form a lump of hard sliver and of course this lump must proceed further as a hard section of strand. This should not be tolerated, as tenders should be instructed to allow the tail ends to run out evenly, new slivers being put up to the rolls and run through, making one good splicing in the delivery can if same contains sliver. This method will not take any more time or trouble than will the wrong method, and it pays to observe that little thing.

Again, we have a draw frame which of course knocks off when an end breaks, but does not do so instantly, that is, the end of the sliver going forward will pass almost to the back rolls or possibly through same before the frame stops, making the stop motion practically useless. The cause of this is probably the small matter of a loose or dirty knock-off spring which can be adjusted in a few minutes. But realize the amount of trouble that such a small matter will cause if it is not corrected promptly.

If the stop motions do not act as originally intended, they might as well be disconnected. Of course all this should be drilled into tenders and a penalty imposed if any delinquency occurs, because unless we all get the help to observe the little things,

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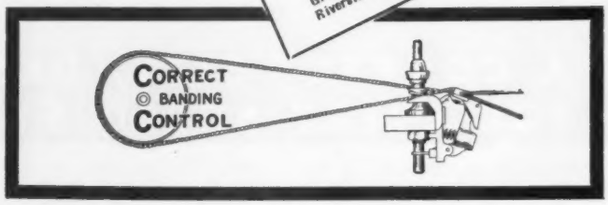

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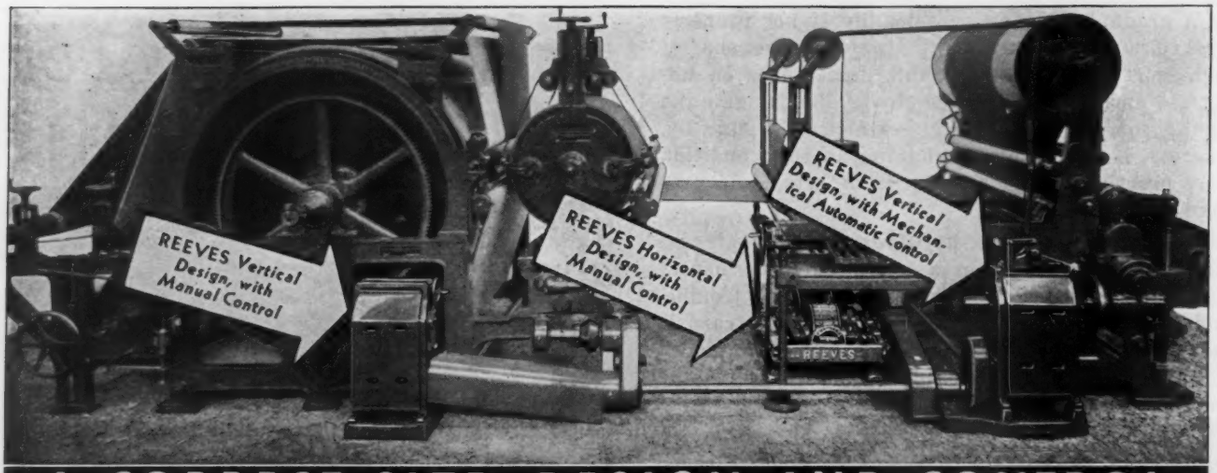
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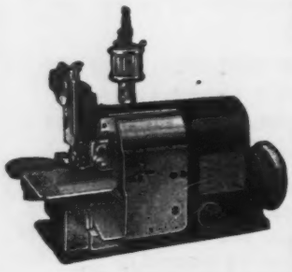

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there will always be unnecessary trouble in the mill.

However, fearing to take up too much space with my remarks, I will, reluctantly, leave off at this time, and at some future date will do some more reviewing of any observance of the little things that count.

E. D. (R. I.)

Roll Settings on Spinning Frames

EDITOR COTTON:

Perhaps the most important point in the spinning of yarn is the roll setting. However, a great many conflicting opinions are encountered in any discussion of this subject among a group of spinners. Surely some of them are correct scientifically and some of them must be wrong. In submitting my ideas on the subject, I can only claim that they have proved to be eminently successful in my experience and I would urge spinners to give them a trial, even if on a very small scale.

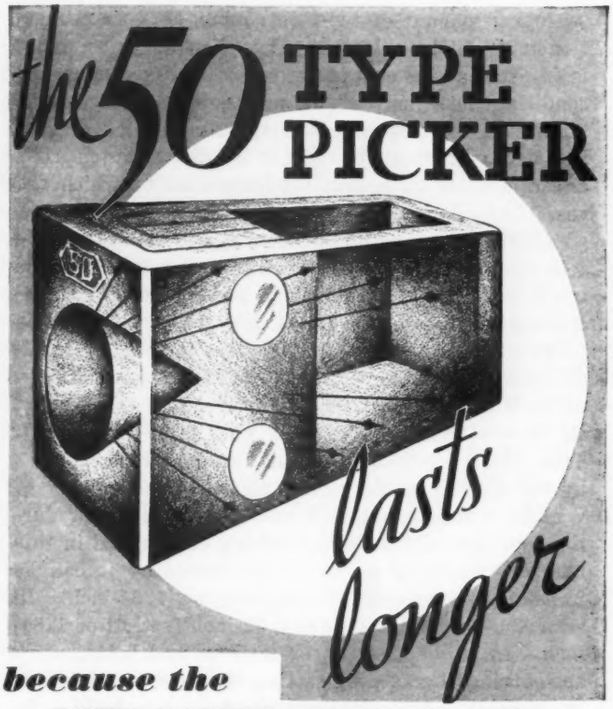
I submit that there are no hard and fast rules as to the exact distance from center to center of various drafting rolls. To say that the distance between the front and middle rolls should be 1/16-inch more than the length of the staple is, in my opinion, misleading and likely to be the wrong setting in the majority of cases. (Of course throughout this discussion I am referring to weighted rolls).

The general principle which I have applied with great success is that rolls (front and middle) should be set just as close together as permissible without causing cockled yarn, when other causes of cockled yarn are absent. I have never found it necessary to alter the fixed settings between the back and middle rolls as they were in every instance ample to accomplish the break draft. Of course, in attempting to handle long staple cotton on frames that were intended for shorter staple, a change in roll stands is called for. A safe rule regarding the distance between the back and middle rolls is to have it not less than ⅜-inch in excess of the staple length between centers.

To get good running and quality, no leeway is allowable on front and middle roll settings as indicated above.

Before going into the practical methods of maintaining ideal settings, I will set forth some conditions which largely determine the best position of the rolls. First is the control of the blending of the cotton which should always be as uniform as possible. Even if perfect blending is attained, very few cotton classers will agree as to the exact length of a given staple, say in 64ths of an inch. And I maintain that to get the best results, no more leeway than 1/64-inch is allowable in roll settings. Mind you, I don't say 1/64 over the length of the staple. I will go into the practical method of determining the setting shortly. The point I wish to stress is that I consider it wrong to set rolls, say, 1/16-inch wider than the staple because there is a variation of opinion as to the exact length of staple, among different mill men.

Other conditions met with are: different kinds of cotton, some of which have more natural twist or



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wiriness; amount of twist in roving (in this connection it might be said that very often too much twist is inserted at the speeder in order to offset some bad condition there, such as wrong tension and lay gears, humidity, etc.); speed of rolls; bulk or hank of roving being drafted; humidity; condition fluted rolls and other less important conditions, all of which are variable.

From a long experience I have learned that the following method of maintaining good roll settings is not difficult and is reflected in good running and increased strength and evenness of yarn.

For a given staple, get the rolls (front and middle) close enough so that some cockled yarn will show up on a nearly full bobbin (assuming of course that all known causes of cockled yarn are eliminated). Then start lengthening the distance between centers by 64ths until cockled yarn is no longer made.

I have found that in most instances after or during a prolonged run with a setting determined in this manner, whenever cockled yarn shows up it can be immediately corrected by opening up 1/64-inch. In some cases it is best to use 1/32-inch instead of 1/64-inch. In either case, closer settings and better work are obtained by keeping settings as close to the staple as possible. An occasional check-up by closing the rolls by 1/64-inch is advisable. I have found that provided rolls are not excessively weighed, fibers are not broken during spinning drafting, and too close a setting always produces cockled yarn. Set the top rolls 1/32-inch wider than the bottom rolls.

CONTRIBUTOR NO. 6382.

Questions on Fly Frame Compounds

EDITOR COTTON:

Here are a few questions for the boys. The answers, I am sure, will prove interesting to all students.

1. On a certain compound we have a 20 gear, known as the take-up gear or compound pinion, driving the sun gear having 124 teeth; 4 bevel gears all 39 teeth. The bell gear, 50. On another we have a 20 compound pinion driving a sun gear having 124 teeth, 4 bevel gears all 40 teeth. Bell gear, 40 teeth.

On one of the so-called new differentials we have an 18 gear driving a 30 gear, and on the same stud a 16 gear driving a 40. Bell gear, 50. On another differential we have a 28 gear driving a 25 gear, this gear driving an internal gear with 80 teeth. Bell gear, 38.

Which of these two compounds described offers the least resistance to the cone belt or bottom cone? Why?

2. What objection do you find to the disc type?

3. Why do we find such a difference in the hyperbola curve of the top cone at the beginning of a set of roving? Is the bobbin-lead system to blame for a part of this defect?

4. What will cause a variation in the number of coils to the inch from the empty to the full bobbin of roving?

WASH (R. I.)

An "Old Man" (over 45) Has His Say

EDITOR COTTON:

We read and hear so much these days about age limit. A man need not apply for work in some places after he is 45 years of age. What is going to become of all these older men if they must be run onto the switch and left there? Who is to take care of them and their families if they are too old for a job? It seems strange to me that when a man is right in his prime, and has had years of experience and has profited by it, and is well physically and mentally—that he must be turned down because he is a few days, months or even years passed his 45th birthday. What is the solution?

"WASH" and other readers of COTTON will tell us the why and wherefore of it. Of course I know it is speed and more speed in the cotton textile mills today. But, is a man required to be able to run a hundred yards in 10 seconds or do a 24 foot broad jump and a 6 foot high jump in order to qualify for an overseer's job in a cotton mill? Or for many other positions which an older man could handle just as well as a younger man? Doesn't experience and judgment count for anything today? I notice that young men were not put at the heads of those great armies in the World War in Europe. It seems that older men of experience and judgment were wanted in those responsible positions. It really seems as if some of the young men of today consider the older men just petrified mummies, incapable of thinking or acting, not up to date. Many young men of today resent an older man advising them in any way or on anything because they "know it all". When I was a young man I always thought that the advice of an older and experienced man was something worthwhile. I feel sure that if I were the superintendent of a cotton mill today and was in need of an overseer, I would prefer a man of 50 or 60 years, with many years of practical experience, to a man of 22 or 23 years of age with very little actual experience. Especially in the case of an overseer of carding who had acquired most of his knowledge from books.

Now don't misunderstand me. Book knowledge is fine, but how far will a man get in a cotton mill with that alone, but it, coupled with working experience on the machines, is what makes for success, I believe.

Now, I have probably stirred up a hornet's nest among the young overseers. Well, let them sting. I can take it. I have been stung before. I have in mind an overseer of the cloth room where I once worked, telling the butcher in the village what he could learn out of a book, "Why," said he, "you can learn how to do anything out of a book." "Yeah", said the butcher, "you could read how to kill a pig out of a book, but you would be pretty sure to cut a gut before you got through." Now wouldn't he? If he did not have experience in that work, and so it goes all along the line—experience turns the trick.

One large textile company gave orders some years ago not to hire any help after they were 45 years old—and a great doctor has said that men ought to

be chloroformed when they are 45 years old. Well, that would be fine. As long as a man is of no use on earth after he is 45 that would be a nice, easy death. I believe that any company that stops their overseers from hiring help who are over 45 years of age not only handicaps their overseers but are working against their own interests by excluding skilled help.

What is the matter with card grinders, loom fixers and speeder fixers after they are 45 years old? An older fixer will find what is wrong with a machine, fix it, and have it running all right while many a young, inexperienced fixer will be "barking at the wrong tree". Give the younger fixers time and experience, and they are O. K.

I remember one old lady who used to work for me on fine speeders. When I would go around to take hanks, many times I would find that she had taken off more hanks than any young speeder tender in the room—and she was over 60 years old. How did she do it? Just by experience and judgment. When she was putting in roving the speeder was kept running. She was not in the front alley piecing up ends, with the speeders stopped due to bad piecings in the back, and when she doffed the speeder and started it up, many times every end started up all right. There is where she gained her hanks, while many of the younger speeder tenders would take about as long to get their speeders going, starting up ends which had been broken down, etc., as it took to doff it. Here is where the younger operatives lost hanks in a week's run. This and the time lost when they were putting in roving and their speeder was stopped to piece up in front due to making bad piecings in the back breaking down ends in the front.

Another old lady who worked for me on speeders sometimes would put in the entire four rows of roving without stopping the speeder to piece up an end. Doesn't an operative like that make better work for the next process? That is another place where experience counts.

Some amusing things happen around a cotton mill. I have in mind a mill near here where a new superintendent took charge of the mill and one day, while going through the carding department, he came upon two young fellows sitting in a window, fooling. He stopped in front of them and looking at them said, "Don't you fellows know who I am?" One of them said, "No". "Well," said he, "I am Mr. White, the new superintendent." "Oh, is that so? Well, you have got a damned good job; you want to stick to it." There is another case of a textile graduate not making good.

A superintendent of a mill where I was once located thought that he would like to try a textile school graduate as carder. The young man he hired was a fine chap, about 23 years old. But he proved to be a dead failure as a carder. The poor fellow even grew a full beard to make himself look older, but the beard did not seem to help, for he was allowed to go after the work throughout the mill was running very badly. As I said before, I have not a thing against the textile school graduate. What they learn is all right. But I claim that a carder should not always do just what the figures show.

Now, 1.20 times the square root of the hank is the standard twist per inch for different hank roving. But any experienced carder knows that will not do on different kinds of cotton and on fine and coarse hank roving. An older carder knows when to put in twist, and when to take out twist, if the cotton comes in shorter or is of a poorer grade. It may run fairly well on the fine speeders, and after this cotton has been run several days there may come on a hot, damp spell of muggy weather. Then there comes a howl from the spinning room. The roving is breaking back in the creels. You put in twist and it is now too late. The creels are full of this work and if this weather holds, the boss spinner, as well as the frame spinners, is in for a lot of grief. Nothing is more aggravating to a boss spinner than to have the roving continually breaking back in the creels.

Now here is one place where the older carders come to bat. They would have seen trouble coming in time, when this shorter or poorer cotton came in, and would have made the roving a little heavier and put in a little twist, thereby saving the spinning department a lot of trouble.

Would the very young and inexperienced boss carder have seen trouble coming in time to prevent it? Maybe. I think "WASH" is right. A young man cannot jump from a textile school into a card room as overseer and make a howling success of it unless he has a mighty good second hand, good oilers, and perhaps above all, good card grinders.

I have in mind a young man, a textile graduate, who took a job as general second hand in a large mill near by. He could figure anything from the water wheel to the loom. But he fell down when the boss ordered a part of the room to be put onto coarser work. Now the railway heads in this mill had adjustable trumpets, so the hole in the trumpets could be made larger for coarse work and smaller for lighter slivers. When this heavier sliver came into the railway head, it pulled the trumpet forward and the evener ran the cone belt clear down on the small end of the top cone and there it ran nearly all of one afternoon, making a wrong weight per yard of sliver. This young man did not know how to open up the hole in the trumpet, for if he had done so, then the evener would have run the cone belt up near the center of the cones, and then he could have weighed the sliver and adjusted the evener to the weight per yard wanted. Evidently the books did not tell him what to do in this case as well as in many others.

I think "WASH" is a little too severe in his statement when he says that if an overseer did not know some one thing he would fire him. I think it would be better for "WASH" to tell him what to do and give the boss another chance. We all learn to a certain extent from one another and none of us knows it all. If we fire a man for not knowing it all, the next one we hire may know less.

Recipe for Roll Varnish

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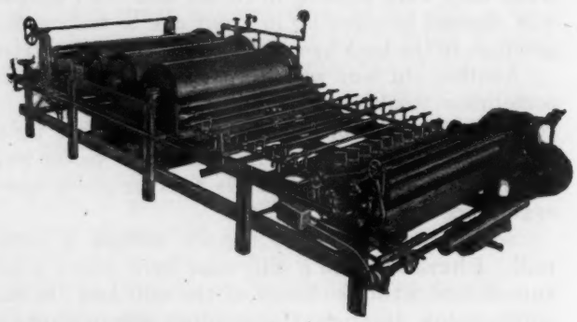

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are good, some are not so good. Here is one which I have tried for comber rolls and leather covered drawing rolls. If any reader does not have this recipe I would advise him to try it: 3 pints of acetic acid; 1 pint of water; 14 ounces of gelatin; 16 ounces of chrome green. Simmer over a slow fire. If more is needed double the amount.

K. C. (CONN.)

Comments on Fly Frame Tension Gears

Criticizes "T. R.'s" explanations of why different tension gears may be necessary on same makes of frame . . . . . .

EDITOR COTTON:

The article by "T. R. (N. C.)" on page 79 of the September issue of COTTON, giving some of his reasons why different tension gears are used on the same make of fly frames running side by side, is very interesting. He brought to light a few questions which are worth some consideration. He is sensible enough to state that he is not a pessimist, by saying that he "will not say that the same tension cannot be used on both frames successfully", thereby claiming that he is not trying to know too much. I like assertions of this kind and I believe "T. R." is sincere in every way.

However, his discussion about the new assistant superintendent who ordered that all tension gears on frames which were running under the same conditions be the same in every case surprises me because I for one would agree with the assistant superintendent's views on the matter of tension gears, and though I believe our friend's statement about the room becoming a perfect mess on account of that order, I am inclined to think that probably some of the faults, or at least one of them, listed in "T. R's" letter may have been more responsible for the distressing effect.

I make this statement because I am always a firm believer in the necessity of having the same tension gears on all frames which are running under the same conditions and especially side by side, and it is my experience to have had always such a condition prevail successfully.

What I have found in the case of, say, a pair of slubbers, where one has been supposed to have been "running slack" and that particular frame has had the tension gear changed accordingly, is that we have had the distressing result of the production of a different size of bobbin to that made on the opposite frame, with the result that our intermediate creels were terribly upset, naturally making creeling more difficult.

Of course, upon proper investigation it was ascertained that it was not the gear which should have been changed, but that the cone belt required "taking up" a little. This belt, upon feeling of it, gave the impression of being tight enough, but just feeling at any belt will not give anyone the true picture of its driving power. Therefore, I think that when the tension on one frame varies to any extent more than on the others running under the same conditions, other items which might affect the tension should be investigated before resorting to a change in the tension gear itself.

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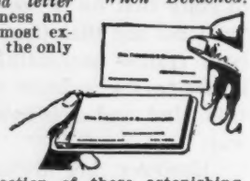

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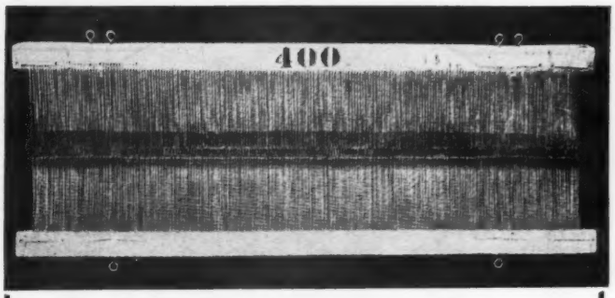
Our friend "T. R." gives as his first item what he thinks may be one cause for this trouble: "All belts are subject to more or less slip." Certainly, but surely the condition regarding belts will only be applicable to the cone belt in this case, because even if the driving belt gave more or less driving power the whole mechanism would benefit or suffer accordingly. Of course, I am expecting some comment on this statement from someone who will tell us that if the frame runs slower there is bound to exist a slacker tension, but I do not think any real fixer would allow any frame to run in such an obvious condition.

"T. R's" second possible fault states, "The reciprocating mechanism on one frame is more easily driven than on the other." All right, but surely that must prove the need for overhauling that particular section, because all this mechanism being of the same design in every respect, I fail to see that if all obstacles are removed, say badly meshed or set gears which prevent freedom of every action, why all this mechanism should not act precisely the same in every case and with the same freedom. That is a point worth consideration, especially where fixers are careless and seem to think that a tension gear will do the trick.

Take the case of where a rack is dragging or sticking somewhat at each successive change of one frame. On the frame opposite, the rack is functioning perfectly and giving the full lateral traverse instantly at each change. Both are running with the same tension gears but the frame with the "lagging" rack naturally will give trouble by resultant tight winding. The tender requests the fixer to change the tension gear on that frame. This done, the tender obtains a little comfort for a time, until perhaps at one point the rack finds a little more freedom, hence a larger traverse occurs for that change, the result being that the ends run slacker, and in nine cases out of ten, rather than call the fixer again, the tender will take a chance of manipulating the rack to tighten the ends, which anybody knows is all wrong. All of this of course is the result of the fixer not using a little common sense to ascertain the condition of the mechanism involved.

The third fault quoted in "T. R's" list is that "worn flyers do not exert the same pressure on the bobbins". I take it that he means to infer that the pressure of the presser pad on worn flyers does not exert the same pressure as on, say, good flyers. That is possible, of course, though I do not possess any true information or data on this pressure of worn or good flyers, but if one frame has worn flyers, and the other has new ones, or some better than worn ones, there cannot be any true comparison because the same conditions do not exist. Therefore, I cannot offer any discussion on that point. Still, I may state that I have truly seen frames running with old and new flyers of the same type and there was absolutely no noticeable difference in tension on their respective bobbins, the same tension gears being used on those frames. However, "T. R." may have had more experience and information on this subject, so I choose to give him the benefit of the doubt.

Now, here is one point that draws my interest. Please note "T. R's" fourth item, "All cone belts may not be set to the specified distance from the end of



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the cones at the beginning of a new doff". "T. R." is right in that respect, but I must warn him to be careful in making statements such as this, because he is likely to be ridiculed by our friend "WASH", in a way such as I was on page 77 of the September issue. I made a similar statement about the setting of the cone belt, in regard to slubber tension.

However, I agree with "T. R." in this matter because there is such a thing as incorrect setting of the cone belt at the start of the set. One firm of machine builders, at least, gives settings for different sizes of bobbins. The mention of bobbins brings to my mind another fault which may cause the application of different tension gears. For example, take a case where there is a quantity of old and new bobbins. Some tenders will take care that they get a good supply of new bobbins and use them, and the tension on their frames will be all right. Now, where a tender must use all of the old bobbins which are slightly decreased in diameter, possibly by rough usage in a bobbin cleaner, this will call for a different tension gear in most cases from the one being used on the frame using new bobbins.

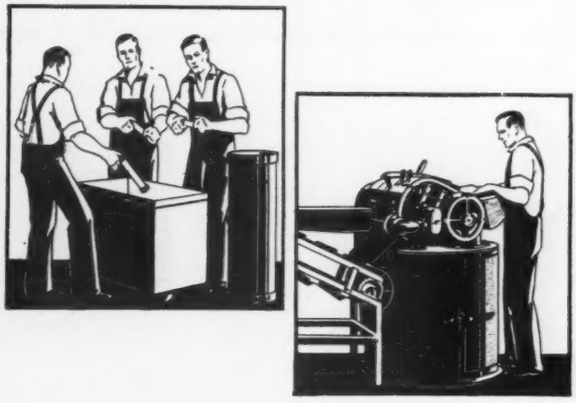
The fifth cause stipulated by "T. R." was "If uneven staple is being used, the draft efficiency is not the same on all leather top rolls". True, but really this defect would have to occur in the case of all the leather rolls on a frame in order to cause a different tension gear to be used other than the right gear as used on other frames running the same stock, where, we will say, there was a new set of rolls in the frame. Now, I am hoping that someone will not tell me that a set of new rolls will alter the tension sufficient to cause a change of tension gear. I know it will not.

His sixth item also deals with leather rolls, stating that, "Certain leather rolls as a general rule are concave which in turn will produce a heavier strand than those that have been just put in new." First of all, let me say that "concave" rolls should never be tolerated anyway. Concave, of course, as used in this respect is rather a wrong term, and I would rather say grooved. However, I cannot understand why the condition as mentioned by "T. R." should be a cause of this tension trouble because a frame may be running with several good rolls in a grooved condition along with new ones, and the comparable degree of difference in tension is unnoticeable. I think in any case that a change of tension gears could not do any good under such circumstances.

The next item he listed was "A cross belt gives a more uniform speed than a straight belt". This does not appeal to me as being of any real importance in this matter, and as to his last fault, about the variation of weight per yard of slubber roving in speeder creels, we could probably say the same thing about all other creels, but I fail to see why this condition should affect the tension to any great extent. Of course, if we take "frictional contact" into account, we may learn something.

In closing, let me say to "T. R." that I think he hit the right mark regarding this tension gear trouble by his fourth statement about all cone belts not being set to the specified distance from the ends of the cones at the beginning of the doff. D. E. (R. I.)

HOW ARE ROVING BOBBINS CLEANED IN YOUR MILL?



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Terrell offers you a faster, better, cheaper system for cleaning bobbins, the TERMACO ROVING BOBBIN CLEANER. This machine cleans 3,600 bobbins an hour and overcomes every disadvantage of the hand-cleaning method.

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2. Pepperell Equipment—10 page illustrated booklet showing High Speed Warping from cones as adopted by Pepperell Manufacturing Company after thorough experiments, installation and product photographs. Issued by Universal Winding Company, Boston, Mass.

11. Whitinsville Rings—16 page illustrated booklet, describing ring manufacture, measurements, types, uses. How to determine flange sizes. By Whitinsville Spinning Ring Co., Whitinsville, Mass.

25. "Lupogum" and "Monopole Oil"—Two booklets on textile sizing and finishing products. Jacques Wolf & Company, Passaic, N. J.

29. Continuous Card Stripper—A 20 page booklet describing in detail continuous card strippers, their advantages, the power required to operate, etc. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

30. Lubrication of Textile Machinery—32 pages, illustrated. Data covering the economical lubrication of all textile machines. New York & New Jersey Lubricant Co., 292 Madison Ave., New York, N. Y.

38. Sleaziness in Full Fashioned Knitting—Illustrated survey with samples of fabric showing causes of sleaziness and methods to be employed in eliminating it.—By Textile Machine Works, Reading, Pa. (This company also issues parts catalog for Reading full fashioned machines with general information on subject of full fashioned knitting.)

62. Rubber Products for the Textile Industry—A 40 page booklet giving a wealth of information on the proper selection, installation and operation of rubber belts, together with charts, showing horsepower rating, pulley sizes, V-belt sizes, also information on all types of hose and rubber covered rolls used in the textile industry. Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J.

64. Efficiency and Performance of SKF Roller Bearing Spindles—A twelve page booklet showing the advantages in power consumption, increased production, savings in lubrication, increased yarn breakage strength to be secured through roller bearing spindles. SKF Industries, Inc., Front St. and Erie Ave., Philadelphia, Pa.

65. Why Cooper Hewitt Light is Better Than Daylight—A 16 page booklet explaining in detail the importance of good lighting and the necessity of proper quality as well as proper quantity of light. General Elec. Vapor Lamp Co., Hoboken, N. J.

66. Dronsfield's Patent Portable Auto-Feed Needle Point Grinder No. 176—describing a new departure in card grinding—John Hetherington & Sons, Inc., 250 Devonshire St., Boston, Mass.

69. Monel Metal Equipment for the Textile Industry—A 50 page buyer's guide and catalog with more than 100 illustrations of various items of monel metal dyehouse equipment. International Nickel Company, Inc., 67 Wall St., New York, N. Y.

70. Fafnir Ball Bearings for One Process Pickers—outlining the advantages of ball bearings in guaranteeing smooth, accurate motion, particularly on eveners, as well as uninterrupted production, ease of operation and cleanliness of bearing units throughout the one-process pickers. Fafnir Bearing Company, New Britain, Conn.

72. The Merrow Butted Seam—A 16-page booklet defining and illustrating the Butted seam, describing its properties and outlining some of the advantages to be gained by its use in textile fabrics. The Merrow Machine Co., Hartford, Conn.

77. Bulletin S 200—Illustrating and describing the new Reeves Variable Speed Drive for spinning and twister frames, explaining its many distinct advantages, and giving charted results of exacting tests. Reeves Pulley Company, Columbus, Indiana.

88. Dayton Cog Belt Catalog—A 32 page booklet full of vital information on power drives, plainly and simply assembled and arranged so that anyone can select the proper standard drive for any condition. It also provides data for the calculation of drives where acquired. The Dayton Rubber Mfg. Co., Dept. C-11, Dayton, Ohio.

93. Metso — Describing this industrial cleanser which has wide use in industrial cleaning of metals, floors, etc., and is used in kier boiling, silk and rayon degumming. Philadelphia Quartz Co., 121 S. Third St., Philadelphia, Pa.

94. New Development by Onyx—Eight-page booklet describing and giving uses of new developments in sulphonated aliphatic compounds . . . called Aliphatic Ester Sulphate and Glyceryl Sulphates. Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

97. Suggestions For The Modern Silk and Rayon Throwster — describing the various uses for Laurel Brand Products and giving valuable suggestions in silk soaking, degumming, dyeing, sizing and finishing. Laurel Soap Mfg. Co., Inc., 2600 East Tioga St., Philadelphia, Pa.

100. Bulletin 174. Controlling, Recording, Indicating Instruments for Temperatures, Pressures, Humidity, Flow. 40 page booklet illustrating with installation photographs the uses and advantages of instruments built to meet definite requirements. Foxboro Co., Foxboro, Mass.

102. White and Light Shade Cotton Fabrics Dyeing and Finishing. National Oil Products Co., Harrison, N. J.

103. Throwing Rayon Crepe. National Oil Products Co., Harrison, N. J.

106. Cotton System Warp Sizing on Multiple Cylinder Machines—a folder showing the advantages of this type of machine in making warps of acetate and other synthetic yarns and spun silk.—Charles B. Johnson, Paterson, N. J.

107. Complete Information on Alemite Lubrication. Showing how costs can be reduced through proper lubrication. Alemite Corp., 1828 Diversey Blvd., Chicago, Ill.

109. Some Properties of Starch and Dextrine—Explaining certain fundamental properties of starch and its derivatives and their action when heated and agitated. Stein, Hall & Co., Inc., 285 Madison Ave., New York City, N. Y.

110. 3-In-One for Industrial Uses—showing the many industrial uses and advantages of this oil. Three-In-One Oil Co., 70 Varick St., New York, N. Y.

115. How to Cut Cloth Room Costs with Automatic Picking Machines and Improved Inspecting Machines—Hermas Machine Company, Warburton Ave., Hawthorne, N. J.

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117. Anti-Friction Bearings as Applied to Spinning, Drawing and Twisting Frames—This bulletin shows with detailed drawings how a simplified design of roller bearing applications is made to replace the plain babbitt bearings and lists the advantages that are gained. It deals primarily with better continuous production and in consequence freedom from equipment care and repairs. Hyatt Roller Bearing Co., P. O. Box 476, Newark, N. J.

119. The World's Finest Sewing Machines—a condensed catalog giving details of the various Willcox & Gibbs sewing machines. Willcox & Gibbs Sewing Machine Co., 658 Broadway, New York, N. Y.

120. Goodyear Mechanical Rubber Goods Catalog — 40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill. Goodyear Tire & Rubber Co., Akron, Ohio.

121. Engineered Packages for the Textile, Dry-Goods and Apparel Industries—Showing the savings to be made through the use of properly engineered packages of corrugated fibre in the shipping of yarn, woven and knitted products. Hinde & Dauch Paper Co., Sandusky, Ohio.

122. Water Filters and Filtration Equipment—Containing complete description of the chemical processes involved in the coagulation and precipitation of foreign matter, the removal of iron, oil, manganese from water and the production of clean water suitable for the textile nidustry, together with tables of specifications for standard filters, and information showing the extra profits to be made by the mill through reduction in costs and process difficulties, through removal of undesirable impurities in water. Permutit Company, 330 W. 42nd Street, New York, N. Y.

129. The Care of Leather Belts — Wall Charts—This 24" x 36" wall chart tells how to dress a belt, how to splice a belt, how to make a good cemented joint, how to figure a belt's capacity, how to find the speed of any pulley and one hundred and one other things about installing and operating belts. Contains horsepower tables and charts showing how to install a belt on any type of drive. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

135. The Pick Method of Weaver Wage Payment—A manual of practical information describing methods to be followed in using Pick Counters; suggested forms, and tables included. Durant Manufacturing Co., 1932 No. Buffum St., Milwaukee, Wis.

139. Textile Detergents—Theory of the use of alkalis and control of pH.—This 32 page booklet explains in simplified manner for the benefit of the layman the chemical processes that take place in using textile detergents in the finishing of textile goods. It contains many useful tables and data. Detergent Products Corp., Peachtree Bldg., Atlanta, Ga.

140. Textile Machinery—Improvements in Design and Methods of Lubrication. A discussion of the problem of lubrication of textile equipment covering operating conditions and factors affecting and affected by lubrication. Card Room Operations, Twisting and Spinning Machines, Silk Throwing, Looms, Knitting Machines, etc., covered. Available in copy of June 1934 issue of "Lubrication." The Texas Company, 135 E. 42nd St., New York City.

146. Lubrication Cost Recording—Outlining the factors to be considered in determining correct lubrication costs, and showing a number of typical lubrication cost sheets to assist a mill in installing an efficient lubrication cost system. Gulf Refining Company, Department C, 3800 Gulf Bldg., Pittsburgh, Pa.

148. Leather Packing—28 page booklet giving timely hints on the proper selection and installation of leather packings, the various types available, sizes and prices. Alexander Brothers, Inc., 406 N. Third St., Philadelphia, Pa.

150. Engineering Data Book on Mechanical Rubber Goods—21 pages of useful information and engineering data, designed to simplify the selection of belting, hose and other mechanical rubber goods for industrial service, including a review of belting requisites for a wide variety of uses as well as helpful tips on installation procedure. B. F. Goodrich Co., Mechanical Division, Akron, Ohio.

152. Plant Checkup List—Crane Company, 836 South Michigan Ave., Chicago, Ill.

153. Descriptive Folder of the New Low Cost Hermas Shear—Hermas Machine Co., Warburton Ave., Hawthorne, N. J.

154. Johnson Bronze Bulletin No. 340—showing over 600 sizes Johnson general purpose bronze bushings. Johnson Bronze Co., New Castle, Pa.

155. Link-Belt Catalog 1274 on the P.I.V. Gear — giving details of this positive variable speed control. Link-Belt Co., 910 South Michigan Ave., Chicago, Ill.

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161. Fence—How to Choose It—How to Use It — book explaining in detail how to choose a fence, determine values and prevent costly mistakes. Cyclone Fence Co., Dept. 4211, Waukegan, Ill.

162. A New Deal in Skein Winding, by Albert H. Brugger. A 12 page technical booklet that is a competent, thorough study of how a long neglected process can quickly evolve into an easy source of profits. The Brugger Winding Company, 41 East Gowen Ave. Philadelphia, Pa.

163. Roto-Koner—Bulletin describing the new No. 44 Universal Winder, known as the Roto-Koner, which has many new and distinctive features. Universal Winding Company, 95 South St., Boston, Mass.

164. —John Rotary Pressure Joints—Bulletin describing this rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instructions, types, sizes, dimensions and prices. The Johnson Corp., Three Rivers, Mich.

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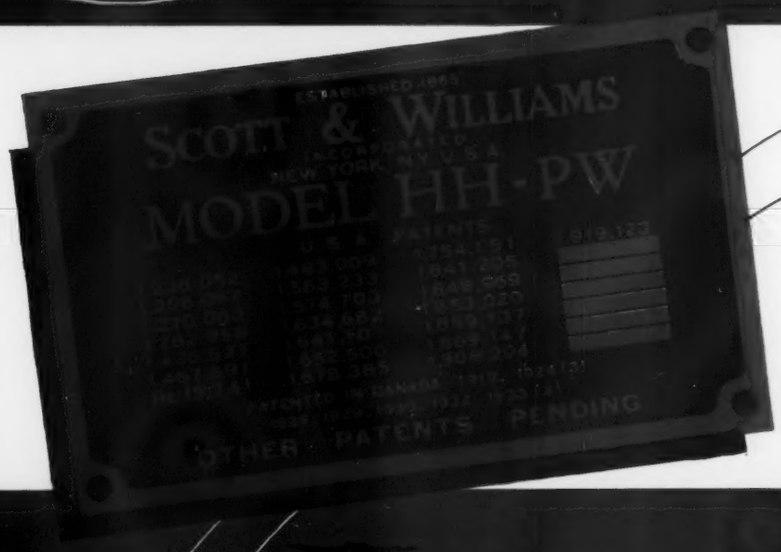
AUTOMATIC RIB BODY MACHINE Extra fine gauge rib fabrics—1 x 1 or 2 x 2, plain or automatically tucked and shaped—for quality underwear.



MODEL ES Distinctive wrap patterns in single, or multiple, needle stripes, and in three-color clox or all-over designs.

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MODEL 80W SHOG Facilities for using 80 wrap yarns, with patterning possibilities of 25 steps plus *shogging* backward and forward of wrap yarns, produce blended and contrasted wrap color effects in unlimited variety of clox and all-over patterns.

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All Records in Attendance and Value Shattered by Knitting Show

IT WAS a good show. It was different. This refers to the 31st annual Knitting Arts Exposition sponsored by the National Association of Hosiery Manufacturers, and staged by Albert C. Rau, Inc. The attendance was increased over that of last year, and what it otherwise would have been this year, by the presence of about three or four hundred representatives of the underwear industry, who were brought together to attend the annual convention of the Underwear Institute.

The exposition was a better one from the standpoint of a more diversified display of machinery and mill supplies than ordinarily, which may be attributed in part to the attendance of the underwear group. It was noted that there were more exhibitors selling to the knitted outerwear trade than in previous years. So, it may be said, it was a good show, by comparison and for results.

There were two distinctive exhibits of full-fashioned hosiery knitting equipment. One was a hand and foot operated machine of the vintage of 1846 displayed at the salon-like booth of the Textile Machine Works, exhibiting in collaboration with the Berkshire Knitting Mills and the Narrow Fabric Co., this trio constituting what often is referred to, and very appropriately, as the Wyomissing Industries, grouped on one hundred or more acres in the town of Wyomissing within sight of Reading, Pa., on the other side of the Schuylkill River. The other full-fashioned machine shown was the single-head device of the Wildman Manufacturing Co., several of which were in operation and one of them knitting 60-gauge ringless hosiery. As an interesting comparison, it may be stated that while the 1846 model machine is capable of producing one pair of standard full-fashioned stockings per day, a modern 24 section machine will turn out from 9 to 10 dozen pairs in an eight-hour day.

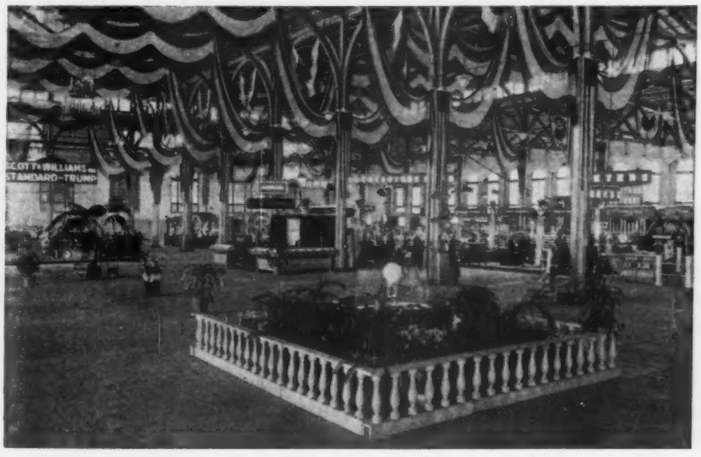
The Wildman exhibit included several of the company's latest model underwear machines, one, known as the tuck pattern, 28 cut, for knitting rayon exclusively. Another, described as the floating pattern, was shown this year for the first time in public. B. Frank Wildman, who with his partner, Mr. McMichael, created the Wildman machines 46 years ago, was a visitor at the booth, contemplating the progress made in the knitting of underwear since he conceived the ideas embraced in the original machine.

While the Exposition was as conspicuous for the near absence of full-fashioned hosiery machines as for attendance and results said to have been obtained by exhibitors, there was no lack of seamless hosiery machines. Among the manufacturers of seamless hosiery machinery it is maintained, and not disputed in full-fashioned circles, that the major companies in the seamless group have made greater progress in the matter of improvement in the past two or three years than can be credited to the full-fashioned industry in a decade. All of the seamless hosiery machine exhibitors reported sales during the Exposition and attributable to the exhibit. But, it was common comment among machine interests that probably the larger business taken during the show was in part for revamping obsolete equipment, much of it stored away for years. An investment of a few hundred dollars in parts, it was stated, enabled manufacturers to revamp several old machines at a less cost than one new one, and yet produce types of hosiery that are meeting with a good response from the consuming public. It was suggested, however, that 1935 models may not be so easily duplicated by merely rebuilding and incorporating attachments designed for novelty stitch and design.

Scott & Williams, Inc., are importers of a seamless half-hose machine built by the Bentley Engineering Company, Leicester, England. The Standard Trump Bros. Machine Co. is the distributor of the imported machine in the United States. It is equipped with 3½-inch cylinder and designed for 240- and 300-needle construction.

A somewhat recent creation is the S. and W. broad-ribbed Komet machine, two feed, with striper. The company also exhibited two complete HH machines for half hose knitting a complete full wrap stitch.

One of the more recent creations of the Hemphill Company is a 24-step reverse plaiting machine, which takes rank with its Jacquard rib-to-toe machine for small size stockings, notably infants' socks. The company featured an 8-step wrap attachment of late model for fine gauge split foot half hose, which is getting



The popular center aisle at the Knitting Show . . .

back to the white sole, for years produced in an extensive way by the Powell Knitting Co., Spartanburg, S. C., and Philadelphia. A 19-step complete wrap machine is mentioned as producing color within color.

H. Brinton Company presented an elaborate display of its latest models in fabric and hosiery knitting machines. Like the exhibits of seamless hosiery generally, the H. Brinton Company booth was thronged at practically all hours of the day and evening. It was noted that while this year's exposition was perhaps not so crowded as the expositions of recent years, the attendance of potential buyers of machinery and mill supplies was greater and there was a falling off of the throngs ordinarily attracted out of curiosity and for collecting souvenirs.

Finishing Machinery, Etc.

The high speed Tube-Tex steamer and finisher exhibited by H. W. Butterworth & Sons Company, Philadelphia, was in almost continuous demonstration in the drying and finishing of fabrics. The device handles cloth in various fiber mixtures at speeds up to 45 yards per minute, and it is stressed that patterns, designs and stripes are finished free from any distortions. The Butterworth Company attaches much importance to the satisfactory treatment which this machine gives to rayon underwear fabrics.

Proctor & Schwartz, Inc., gave their usual demonstration of the company's automatic hosiery boarding and drying machine, and reported sale of one machine during the Exposition. It was stated for the management that the automatic device receives increasing attention from manufacturers year by year.

Comment incident to the exhibit of dyeing machines by Smith Drum & Co. revealed a somewhat interesting situation as to installation of dyeing equipment in the hosiery trade. It was stated by a person competent to speak for the Smith Drum Co. that most of the installation of dyeing equipment is by finishers and dyers, while in the hosiery industry it appears a disposition to have the dyeing and finishing, notably by the smaller mills, done in commercial plants. There are reasons, and for some months have been, for having the work done in this way, as manufacturers during slack conditions in their trade preferred the commercial dyer to having a plant in their own mill.

As has been often pointed out, mills producing hosiery against orders and accumulating no surplus stock may be idle so much of the time in the knitting departments that an idle dyeing plant contributes largely to overhead cost. For a year or more commercial dyeing has been a very competitive business, the charge dropping as low as 50 cents a dozen. It is stated that relatively more hosiery mills in the south include individual dye plants than in the north, and one observer said he thought this accounted in no little extent for the general success of so many of the southern mills. From April 1934 to April 1935, it was related at the Smith Drum booth, 42 machines containing a total of 335 tubes were installed for skein dyeing.

It was noted by visitors at the Exposition that while the 3-carrier device, Kaufman patent, has been the most talked of mechanism produced in years for improving full-fashioned silk hosiery for women, the attachment was not on exhibition. It developed, however, in an interview with a representative of the Universal Winding Co., that the widespread use of the three-carrier ringless attachment necessitated a change in the size and shape of cones adapted to knitting from the triple combination of carriers. "This is only one of the many changes we have noticed in the winding of yarns", it was stated, the most phenomenal of which are those relating to the use of rayon in weaving, whereas only a few years ago rayon was used almost exclusively for knitted fabric. In this connection it is remarked by old-timers among exposition visitors that not so many years have elapsed since cotton and silk were conspicuous among the displays of fabric, while now rayon seems to be at the forefront in fabric and making great strides in the yarn division, being adapted to so many mixtures for obtaining desired style effect.

What promises to be an important addition to the light auxiliary machinery for use in textile mills is the Frazier hosiery testing machine. It occupies about the same space as the late model H. Brinton Company necktie machine. Its use is to test hosiery as to the character of the finish employed. Some finishes detract from certain qualities of hosiery while others may have an opposite effect. A stocking undergoing test by this precision instrument is stretched in length and in circumference.

The Federation of Women's Clubs, which provided a Frazier machine for installation in the National Bureau of Standards at Washington, specifies as minimum 100 cycles to be attained by hosiery in respect to "stretch-endurability" and "recoverability". Many stockings break or develop a runner at three or four hundred cycles under a load of 10 lbs., whereas with twice that load other specimens will record in excess of 1000 cycles, "cycle" being a term expressive of measurement of results.

Scholler Brothers, Philadelphia, manufacturers of textile lubricants and finishes, employ a Frazier hosiery testing machine in arriving at comparisons of the character of its finishes with those of other producers. This is said to be found to be quite useful in informing manufacturers of silk hosiery as to the precise type of finish that they require for the goods they are making. Some of these machines are installed in certain full-fashioned mills in which manufacturers do their own testing of stockings before and after applying the finish. Speaking of the tests by his company, one of the Messrs. Scholler stated that "the defects in construction are very few in contrast with the great number of breaks due to the use of improper finishing material".

What is said to be the most speedy sewing machine ever attempted in the world was exhibited by the Union Special Machine Co. The operating shaft is directly connected with a motor running 1,750 R.P.M. This is probably the latest creation of the Union Special Machine Co. unless it be their Model 51-700 E style for sewing facing on underwear as reinforcement for buttons and buttonholes. The improvement claimed for this machine is that in its use there is no

puckering of the lighter woven fabric that is being sewn on to the knitted fabric.

After more than three quarters of a century in the production of sewing machines, the Willcox & Gibbs Sewing Machine Company recently brought out what is described as their Fastlock machine, which fastens elastic to the tops of silk, cotton, wool and mesh knee-length stockings, in one operation. The machine is rapid and accurate in performance and features claimed for it are high production capacity and the ease with which it is operated. The company's booth, as has been the case invariably in previous exhibitions was one of a number of focal points of interest.

Another view of the Knitting Arts Exhibition . . .

From the comment of manufacturers of sewing machines, there would appear to be considerable new installation or replacement in underwear mills. For example, the Merrow Machine Company is doubling the space in its Philadelphia branch.

Manufacturers of synthetic yarns seem to have made good use of this year's Knitting Arts Exposition for showing the improvements in fabric knitted from the various process yarns in the synthetic group. The American Enka Company presented no elaborate display but its exhibit did attract a full share of attention, consisting as it did a pair of American Enka seamless stockings described as ringless and sold recently in a leading New York department store for 25 cents a pair, which was said at the time to establish a low price for seamless ringless stockings.

The DuPont company made a lavish display of fabrics knitted from its Acele yarn, an acetate product, this being the company's first showing of Acele products. It was a colorful exhibit, embracing circular knit underwear fabric in self design and also tricot cloth. The company's range of fabrics from its newer type yarns embraced bathing suits, sports dresses, underwear, lingerie and, what received apparently the greater measure of attention, women's gloves. It is related that next to the United States, Japan is the largest of producers of synthetic yarns.

The two finer fabrics shown in the Exposition were, first, a sample of Bemberg cloth, which for sheerness compares with, if it does not surpass, a one-thread silk 51-gauge stocking shown by Robert Reiner, Inc., American representative for the Einsiedel full-fashioned machine.

The American Bemberg Corporation presented an interesting display of Bemberg hosiery and gloves, dresses and underwear fabric, besides novelty yarn, and women's knee length stockings, made of 50 denier Bemberg, for women, in full-fashioned and seamless construction. The North American Rayon Company displayed fabrics from its knitting plant in Elizabethton, Tenn. As there were also exhibits by the Tubize Chatillon Corporation, the Viscose Company, the Industrial Rayon Company and the Tennessee Eastman Corporation pretty nearly the entire gamut of the synthetic yarn industry was represented.

Speaking of fabric and yarn, the Narrow Fabric Company seems to have made a hit with its introduction of elastic tape for knee length hosiery, relieving the wearer of the necessity for garters, and in this connection it can be stated that a comparatively new fabric is constructed with Lastex in combination for women's shoes. The Lastex is woven into the fabric, which has of course only a one-way stretch. It was stated by the Lastex exhibitors at the Exposition that shoes combining the new fabric would probably be on the market during May.

Passing down the corridor of fabrics, the visitor had his attention drawn to an unusual number of exhibits of yarn—cotton in the gray, mercerized cotton, worsted and rayon, to say nothing of combinations and new processed yarns which are coming on the market with such rapidity that, dealers say, it is difficult to keep in step with them. At least one sale of mercerized yarn was made during the Exposition, but it was stated by exhibitors generally that while there was an apparent interest in carded and combed yarns, few if any of the inquiries were translated into sales. Of course there was no general quoting of prices during the Exposition, as this is being taken care of during the regular course of business, with unsatisfactory results, at the moment.

There was heard plenty of adverse criticism of the cotton processing tax among the visitors crowding about the yarn booths, and every once in a while somebody spoke up in advocacy of some drastic movement for diminishing exports from Japan. It is a safe assumption that if there had been a booth devoted strictly to aspersions on Japan for her cheap labor and underselling hosiery in the United States market, it would have been continuously patronized. There was displayed a chart showing the importations of various types of hosiery from Japan, but this was a silent witness of the raid on American industries and did not receive as much attention as the vocal charting.

The Adelphia Textile Company reports good results from its exhibit of novelty processed yarns. It is a buyer of acetate yarns, which are immunized for

The WILDMAN *Single Head*

FULL FASHIONED HOSIERY MACHINE

* . . . virtually automatic. In starting the leg, simply hook welt bar into first course of knitting and start the machine. When welt is ready to turn, machine stops automatically. After welt is turned, machine automatically completes the stocking, and racks back to starting point. In the operation of the footer, simply transfer leg to footer needles and start the machine. The foot is then knitted automatically, and when completed, the machine racks back to starting point . . . *Literature on Request.*

WILDMAN MFG. CO., *Full Fashioned Division,* NORRISTOWN, PA.

fashioned and seamless hosiery. It makes a feature of Japan silk and spun silk resist yarns and dyed, natural, and mercerized threads. James T. Hunter, formerly engaged in the manufacture of hosiery in Philadelphia, is representing Adelphia Textile Company.

While on the subject of yarns and threads, how many persons know the meaning of the letters O. N. T. on the Clark and the Coats spool cottons? The question arose during many inquiries as to the meaning of the three letters, at the booth of the Spool Cotton Company, which has been expanding its production of industrial sewing cotton in step with the increasing output of domestic sewing cotton. "O. N. T. stands for Our New Thread", said the man at the booth.

Official announcement made during the progress of the Exposition that Boger & Crawford, mercerizers, Philadelphia, had bought a large number of spindles to be added to their equipment in the company's spinning mills at Lincolnton, N. C., was received with mixed comment in the yarn trade, inasmuch as it implied an improving situation in the combed yarn industry notwithstanding complaint was heard at the several yarn exhibits that prices were so low in instances as to contradict such a theory. For example, 30s single combed were sold in the Philadelphia area quite recently for 39½ cents in one instance, 38½ cents in another and a sale reported having been effected at 37. This report was vouched for by the representative of a southern mill who said that considerable of the low priced yarn on the market appeared to come from spinners who were compelled to liquidate their stock.

Manager Rau, of Rau, Incorporated, who staged the Exhibition in the Commercial Museum Building for the National Association of Hosiery Manufacturers, reported there were 18 more exhibitors this year than a year ago, notwithstanding probably a half dozen in the 1934 show did not use space this year. Some of the exhibitors used more space than a year ago and some appeared to use less, so that in a general summing up, it would appear that a lessened area was occupied by exhibits. This did not detract from the importance and value of the Exposition, however, as what was lacking in occupied space was more than compensated for in the broader central aisle and enlarged central garden designed as a rest room, in the center of which a fountain was playing continuously.

Visitors to the Exposition were prone to wonder why the Exhibition Hall was set up in a locality remote from street car routes, the site being chosen before automobiles became a favorite mode of passenger traffic. However, the attendance this year was so large that some wit remarked the better mouse trap, better book and better sermon from a house in the woods had nothing on the Knitting Arts Exhibition. And, it was suggested that if the visitors by automobiles increase as rapidly in the next few years as in the past two, more parking space will be required before additional room for exhibits is provided.

Knitters' Convention Discusses Conditions; Elects Wm. H. Gosch

THE National Association of Hosiery Manufacturers at the annual convention on April 24, held in connection with the 31st Annual Knitting Arts Exposition, in full blast from April 22 until April 25 inclusive, elected William H. Gosch president as the successor of John H. Brine, of the Rollins Hosiery Company, who refused re-election. Mr. Gosch is president of the Nolde & Horst Sales Company, New York, and vice president of Nolde & Horst Co., Reading, Pa., hosiery manufacturers.

Austin H. Carr, president of Durham Hosiery Mills, Durham, N. C., and Roy E. Tilles, who is vice president and general manager of the Gotham Silk Hosiery Co., were elected vice presidents. Ernest Blood of John Blood & Co. was re-elected treasurer, a position he has filled for many years. Mr. Gosch is the fourth hosiery manufacturer in Reading to be elected to the presidency of the Association, the others being Gustav Oberlaender, of the Wyomissing industries; Charles E. Leippe, a retired seamless hosiery manufacturer, and Solon D. Bausher, a widely known manufacturer of underwear.

W. H. Gosch A. H. Carr J. H. Brine

Mr. Gosch was elected president; Mr. Carr succeeds him as first vice-president; and Mr. Brine is retiring president —of hosiery manufacturers' association . . . . . .

As the Association now is operating under a New York charter, the office of secretary was created and filled by the election of Earl Constantine, who retains his title as managing director. Directors in addition to the executive officers are: James G. Hanes of the Hanes Hosiery Mills; Henry L. VanPraag of Julius Kayser & Co., and John H. Brine, former president, for one year term. Besides Mr. Carr, the directors for the two-year term are J. H. Davenport of the Davenport Hosiery Mills; Henry J. Herbst, of General Hosiery Co.; Marshall V. Moss, No-Mend Hosiery Mills and R. O. Huffman, of the Morganton Full Fashioned Hosiery Co. In the three year group the directors are: E. S. Jamison, of Joseph Black & Sons; J. E. Millis, who recently was elected president of Adams Millis Corp.; C. G. Burton, Lynchburg Hosiery Mills, and J. C. J. Strahan of the J. C. J. Strahan Company, besides Mr. Blood, the treasurer.

Constantine's Address

Secretary Constantine in a short address referred to an unsatisfactory situation in the hosiery market and said the problem revolves about the practice

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A NEW MACHINE FOR HOSIERY MANUFACTURERS—THE FASTLOCK

The Fastlock is the fastest and most efficient machine for attaching elastic to knee length stockings. The Fastlock handles silk, cotton, wool and mesh stockings equally well, without the use of welts.

Let us demonstrate the Fastlock on your stockings. No charge of course.

WILLCOX & GIBBS

SEWING MACHINE COMPANY

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New Willcox & Gibbs Machines and genuine Parts may be purchased only from company's offices

of manufacturers for sending goods out of the hosiery field for finishing under lower rates than the work could be done under the hosiery code. This phase of the manufacturers' problem was gone into quite thoroughly at a previous session.

While a great deal has been said in relation to Japanese competition, Mr. Constantine pointed out that imports in terms of units are insignificant, and showing that the U. S. favorable trade balance in relation to hosiery was $1,014,061 in 1933 and $74,033 in 1934. The threat of rayon and cotton hosiery imports from Japan, he thought, was potential rather than actual, and, he warned, "we must not disregard the fact that Japan is one of the largest customers of American products and that the trade balance between the two countries is overwhelmingly in our favor."

President Brine Discusses Conditions

President Brine in an address to the convention referred to hosiery prices as ridiculous. He thought that under conditions as existing just now there should be no plausible excuse for any manufacturer being ignorant of the exact cost of his product. He feared there could be no improvement in conditions until individual manufacturers take matters in their own hands and have courage to insist upon reasonable prices; that neither the Association nor the Code Authority could improve the situation so long as some manufacturers offer merchandise at less than cost of production. He regretted that, while there has been a reduction in the per cent of irregulars caused by unevenness in silk, there has been a marked increase in the number caused specifically by "cleanness" defects, the more nearly even fabric of today portraying these defects in bold relief.

The raw silk committee reported that much of its work had been concentrated on means of obtaining evenness, but that with the advent of the three-carrier method for producing ringless hosiery the committee is directing its efforts to problems having to do with "cleanness" and neatness.

The interest of hosiery manufacturers was centered more particularly in the report of the Committee on Standardization and a session on Monday devoted mainly to an expose of the evil of practices that can be charged to the selling of hosiery in the gray to concerns and individuals having them finished by dyers and finishers operating at prices much lower than would be tolerated by the Hosiery Code Authority. The attendance of manufacturers at this meeting on Code, which preceded the official opening of the Knitting Arts Exposition, attracted almost twice as large an attendance as the annual convention.

It often had been alleged by manufacturers selling their hosiery for legitimate prices that the market was flooded with trashy goods much of which had been bought in the gray and finished in commercial finishing plants. It was this, it was alleged, that was a large contributing factor to the lowering of hosiery prices as established in December and January when demand was at the peak for the last quarter of 1934 and the first quarter of 1935.

Critics of unethical practices included, in addition to Mr. Constantine, Joseph A. Harron of the Harron Hosiery Company, who wanted to know what the Code Authority intended doing about a mill guaranteeing his hosiery, and what the guarantee implied. This possibly was suggested by a recent promotion sale of hosiery at $1 a pair in a Philadelphia department store, each purchaser receiving a printed guarantee that within six months the hosiery could be exchanged for a new pair of equal quality if the pair obtained at the promotion sale proved unsatisfactory.

John M. Botts, Harrington & Waring, was another critic of current practices contributing to a disturbed market. He suggested that if there should be enforced curtailment it should be applied to the entire industry. That otherwise "chiselers" who dye up gray goods in mill stocks flood the market. He made the suggestion that no goods should be shipped into a market that is already supplied. Hugo Hemmerich, general manager of the Berkshire Knitting Mills, suggested that the industry suspend production for two weeks in every six months, thus reducing operations to 48 weeks yearly. Parker Margeson of the Phoenix Hosiery Company recalled, for the information of the meeting, that one year ago the manufacturers in session in Philadelphia approved such a plan, but had not profited by it, and it was recalled also that while the manufacturers were in session at the Bellevue-Stratford Hotel, establishing $5.75 as a minimum price for 42-gauge four-thread hosiery, salesmen for several mills were circulating in Philadelphia and selling at previously prevailing lower prices, accepting pre-dated orders. It was observed in a sort of stage whisper that the identical type of hosiery has been available recently at as low as $4.65 a dozen finished, and $3.85 a dozen in the gray.

As indicating the satisfaction of manufacturers with the present work time schedule—that is, a maximum of 80 hours a week of 40 hours per shift—a vote on the question of increasing the work time resulted in 97 against to the 3 in favor, and another vote showed only 5 in favor of a decrease.

By way of showing that the work time schedule may operate to the disadvantage the small manufacturer, F. S. Wilcox, the Excello Mills, Union, S. C., said in effect that a mill operating 20 machines 144 hours per week may compete with a mill operating 500 machines 77 hours per week, but, he said NRA puts them both on an 80-hour schedule, which makes for an increased production of 4 per cent for the large manufacturer and a loss of 44 per cent for the small manufacturer. "I find," Mr. Wilcox went on, "from figures furnished by the Code Authority there are 8,210 leggers in place, of which eight manufacturers own 3,179 and 13 own 4,426." This means that eight manufacturers control 34½ per cent of the total industry and 17 control 48 per cent. The poverty of our small mills is the prosperity of larger concerns, said Mr. Wilcox, who suggested that a fair method of improving conditions for the small manufacturer would be to determine the machine hours used by each manufacturer before NRA became effective and curtail the whole industry on a fixed percentage of those machine hours.

A meeting of hosiery manufacturers on Tuesday

to hear the report of the Committee on Standardization developed the fact there appeared considerable opposition to the report, much to the chagrin of the Committee on Standardization which was headed by William H. Gosch of the Nolde & Horst Company. However, the meeting, by a vote of 55 to 9, approved the details both as to construction and inspection, many of the former opponents voting in the affirmative. This change of heart seems to have been brought about by the explanation of Mr. Constantine that the standards, before being adopted finally, will be referred to the entire industry for action.

Underwear Institute Meeting

Measured by attendance, the annual convention of the Underwear Institute on Thursday, which was virtually closing day of the Exposition, would appear to have been the more important of the several meetings of manufacturers held during the Exposition. Unanimous opposition was expressed to any 30-hour week proposal and to the Wagner Labor Disputes bill. On the ground that industry labor and the public had become already adjusted to the operations of the NIRA, the meeting favored extension for two years, the opinion having been voiced that revocation of the Act at this time might result in declining prices. It was felt that the NRA in modified form should be continued.

Ralph M. Jones, general manager of the Utica Knitting Company, Utica, N. Y., and Anniston, Ala., was elected president of the Institute, succeeding Sherman T. Haight. Virtually every underwear knitting center was represented at the convention, by approximately 180 manufacturers. President Jones, speaking briefly on the processing tax, said "every attempt should be made to procure its removal." The previous week, he said, every employee in the Utica Company had been given a letter stating that one of the reasons why the underwear business has been so dull in the past few years was an increase in the cost of cotton by one third as a result of the processing tax. This letter he stated suggested that each worker write to President Roosevelt, asking, as a mill worker, for the removal of the tax in order that more goods might be sold. He thought letters from workers had more influence than those from manufacturers.

"Business has become terribly complex in the last few years," said Francis E. Simmons, in a discussion of the work of the research and planning division of the industry, "and unless we understand clearly what is going on throughout the entire industry and what position our own mill occupies in relation thereto, we are apt to go wrong in our planning and in our selling, with disastrous results to our profits."

The retiring president, Mr. Haight, remarked that it was imperative the underwear industry originate new styles, in order to survive. Development of knitting processes has just commenced, he said. He spoke of possible influences in the NRA that seek to break up trade associations, "carrying on a systematic campaign toward that end." He urged that the manufacturers build the Institute up to a still stronger position than that which it occupies at this time. On the question of machine-hour limitations, he thought it might result in the United States becoming a stagnant nation, other countries taking not only our exports market but also our domestic market. He was in favor of allowing industry collectively to limit machine hours; to control production in a crisis, and to check suicidal competition, which inevitably "leads to the exploitation of labor and the bankruptcy of manufacturers." He expressed himself as in favor of continuing the present wage differential between the North and the South, despite his family's investments are ninety per cent in the North.

T. H. Mueller, vice president of the R. K. Laros Silk Co., Bethlehem, Pa., was elected chairman of the Underwear Code Authority, thus taking over a great part of the dual position of Mr. Haight, who resigned from the chairmanship as well as from the presidency of the Underwear Institute.

Some Pertinent Comments on Hosiery Mill Management . .

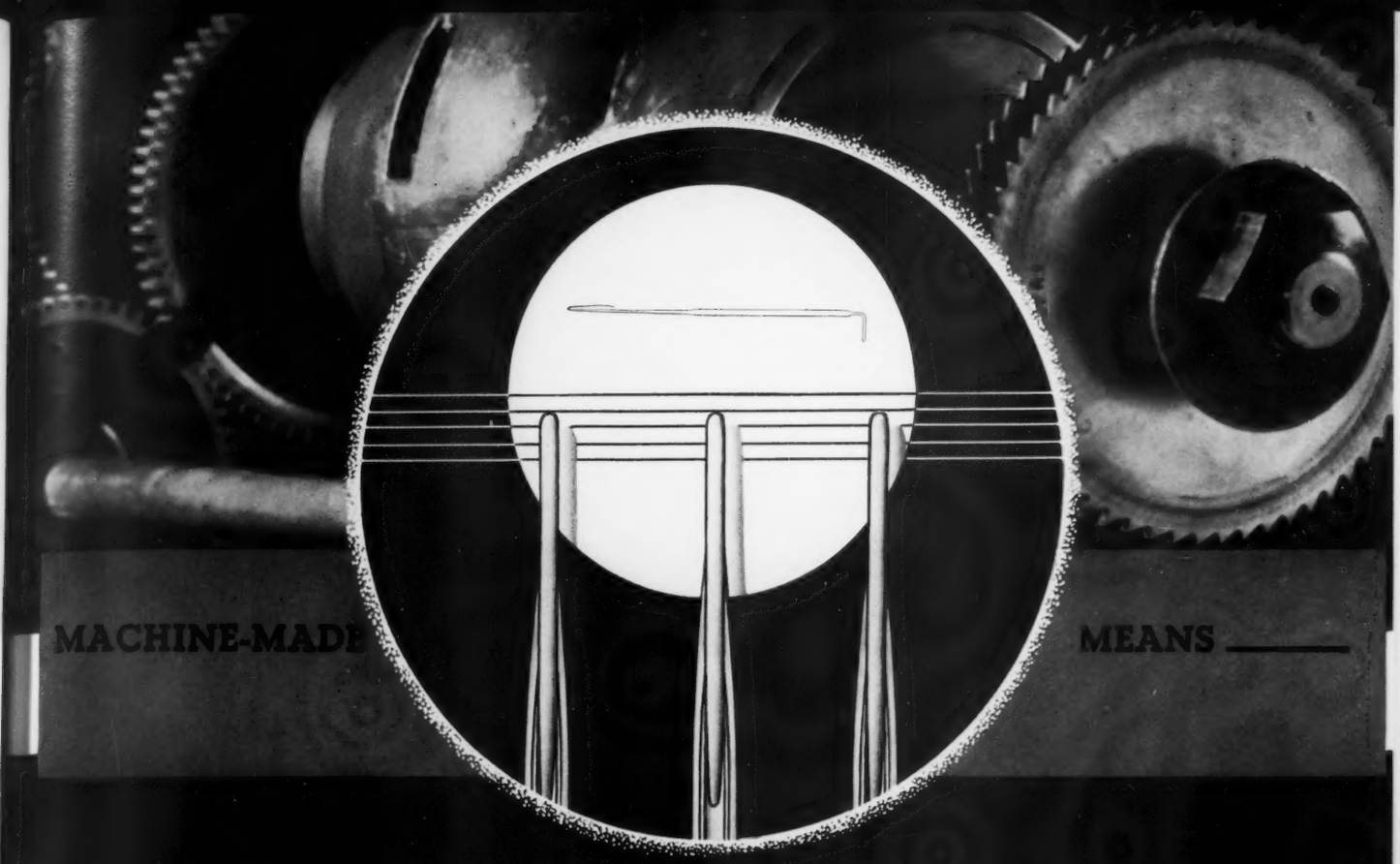
By an Observer

HOSIERY manufacturers who marveled at the accumulations of stocks of women's full-fashioned in March-April and, in consequence, prices at their lowest for this year at a time when there was a 100 per cent expectation of brisk retailing and absorption of production, say a repetition of the mistakes of the first quarter of 1935 or their avoidance will rest wholly on mill management.

Mill management is going to be a bigger job this year than in recent years. It will have to deal with questions of economy of plant operation, production of the best stockings possible at the lowest possible cost consistent with reasonableness, say distributors who complain of unpleasant experiences in the past month or two with competitive prices and character of the hosiery they were offered. The more successful will embrace in particular those who shall have adapted their methods to the changed conditions and their production to the proposal that much of the trade will resist prices that are higher than those of recent months, notwithstanding prospects of increased cost due to circumstances over which manufacturers have no control.

It appeared soon after the outset of 1935 that the year might not be a profitable one for those who were operating plants well advanced toward obsolescence or lacking in the essentials for a saving of time and labor. This is said to be indicated in the fact that new installation already provided for has been mainly for replacement or for a balancing of plants.

Mill management, it appears, will involve a careful study of the character of equipment to be employed. That there will be, for a time at least, no lack of very low priced hosiery from mills having ancient equipment which long ago may have been written off in inventories, is not doubted. But stockings from mills so equipped may not be in demand comparable with potential output, so that it is possible the lower grade goods will repeat for a time what has been experienced in virtually all classes of hosiery—more pro-



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Uniform Overall Length!

Quality in knitting needles is obtained only by scrupulous attention to the smallest details. We call your attention to the blue print enlargement shown here. It illustrates the accuracy with which Torrington uniformity is achieved in just one of the many important details . . . overall length.

Uniform overall length is essential to even knitting. A short needle pulls a tighter stitch; a long needle pulls a looser stitch. That is why the precision of machines is applied in determining the overall length of Torrington needles. Because machines give that extra degree of precision, they are used in this step — and in every step in the making of Torringtons.

"Machine-made" means that every single detail in the manufacture of Torrington needles is planned from blue prints . . . and executed with a precision that only machines can achieve.

OUR PHILADELPHIA RENEEDLING PLANT

1 Every job handled by experts with special modern equipment.

2 Each job kept intact on an individual truck throughout the process.

3 Bars are washed in a special fluid; scrubbed with revolving brushes.

4 Bars are straightened with a special device; brasses resurfaced; slots checked mechanically.

5 Bars filled with Torrington needles; straightened and gauged three ways; spaced also — by gauge.

6 Beards raised uniformly; checked by gauge for height and central setting.

TORRINGTON Spring Beard **NEEDLES**

Reduce Needle WASTE!

● Modern knitting efficiency calls for greater and greater speed. But with increased speed comes the danger of increased needle breakage . . . and the resulting waste in time, effort and money.

As your rate of production rises —watch your needles! There's one way to keep needle breakage down. Use needles of *uniform strength and temper!*

Torrington Needles are built to take fast production in their stride. They are so carefully tempered that breakage is reduced to a minimum. It is this uniform temper, coupled with their strength, that makes Torringtons last longer and produce greater profits from uninterrupted service.

Many manufacturers frankly acknowledge the fact that Torringtons have helped them solve their needle troubles . . . and produce finer, more uniformly knitted fabrics. If excess needle breakage is costing you money let Torringtons be your first step toward eliminating this waste!

TORRINGTON NEEDLES

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ESTABLISHED 1866

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duction than could be absorbed while dealers were pounding prices.

It is stated by persons who may be regarded as in a position to speak intelligently on this subject that a high speed machine capable of knitting 70 courses per minute may turn off better hosiery and at lower cost than 18-section machines against which there may be no charge for depreciation. A great deal of attention has been given to the matter of obtaining a better balance of plant by doubling up footers and installing additional leggers, if necessary, the latter operating two 8-hour shifts per day and the footers on a schedule of three shifts of 8 hours each. An objection to this as urged by manufacturers is that they may be contributing to an increased surplus production. Some favor the scrapping of somewhat ancient machinery and installing complete units of modern construction.

It is a common thought in the trade that a reduction in the number of styles might serve a good purpose; that concentration on the lowest possible number of styles consistent with a manufacturer's trade demands would avert many perplexities and increase the return on the product of the plant. Concentration, by the way, is being stressed, some manufacturers going so far as to recommend selling in the unfinished state exclusively by certain mills. The point is made that finishing has become a highly specialized operation that can be better performed by concerns which devote all their time and energy to obtaining the best results from their operations. Thus, it is suggested, it may be advantageous to a great many mills, with the present set-up, to concentrate on knitting, leave the finishing to other interests and the selling of finished goods to trained sales organizations. This contemplates the purchase of the hosiery in the gray more particularly by manufacturers whose dyeing plants are too large for their output of hosiery. In other words, to obtain minimum cost of finishing, it is obvious there should be a sufficient flow of goods to the finishing plant to keep it engaged maximum time. This has been recognized and is being followed with reported good results, no doubt accounting for the enormity of the trade in unfinished hosiery as between hitherto competing manufacturers. The NRA brought about a reduction of plant output, and yet production in recent months has been in excess of the consumptive demand. Meanwhile mill operation has followed the old time lines under changed economic conditions.

Finishing costs vary in scattered localities, so that manufacturers in a section where the cost is high but who can have the finishing done in sections where the cost is low, are necessarily in a position to offer the finished product at a greater profit than competitors not so favorably situated in this respect. Silk throwsters have been for some weeks strongly intimating an increase in the cost of their processing, due to advances running from 25 to around 100 per cent in the prices of oils and chemicals used in the silk throwing trade. Judged by recent experiences in the marketing of hosiery, retailers will expect manufacturers to absorb this additional item in operating cost.

It is obvious that mill management will this year recognize the changed conditions which have been brought about not only by the operations of the NRA, but by a need for adaptation of production to changes in merchandising. The merchant wants goods when he wants them and he usually does not want to commit himself for their delivery long in advance of putting them on his shelves.

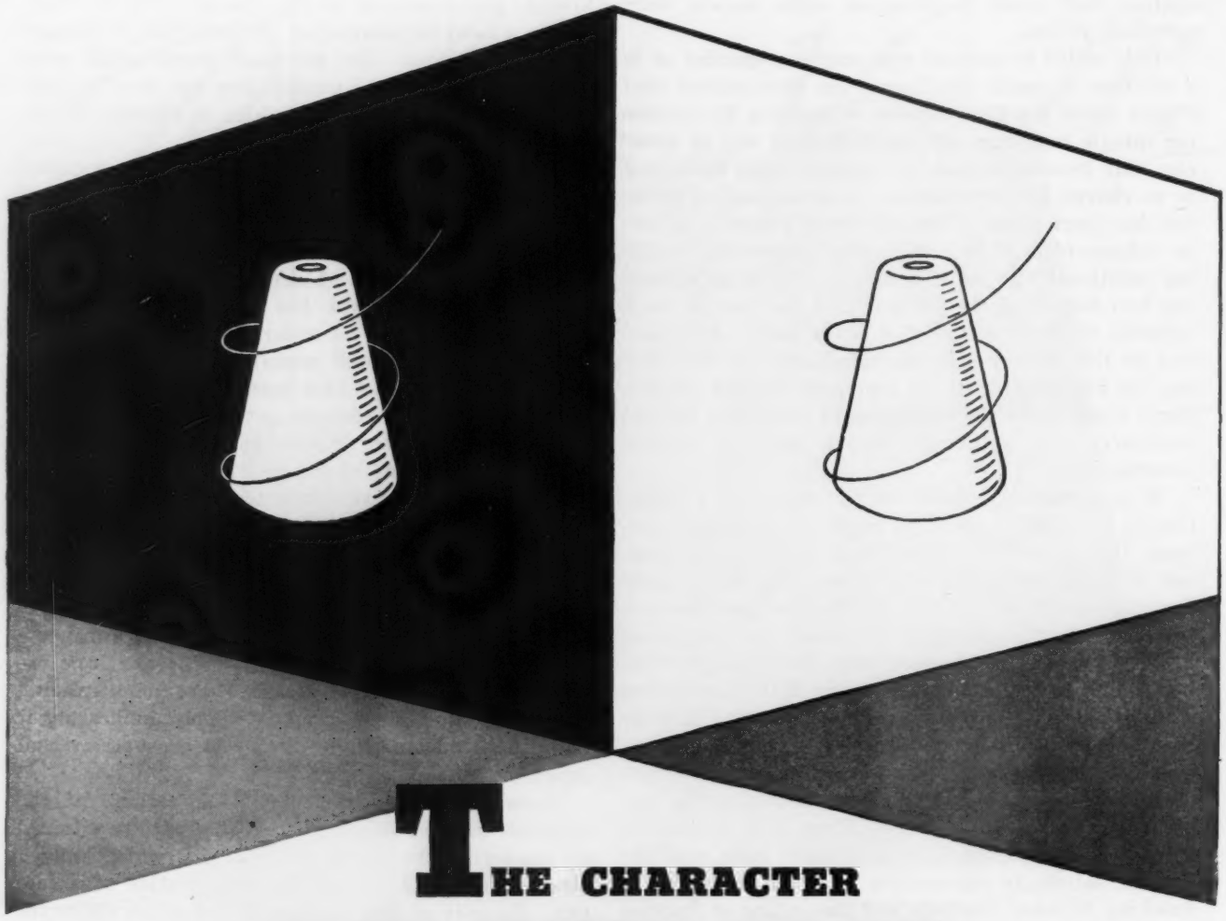
It is believed in some quarters that concentration in the marketing of hosiery might be productive of profitable results, an opinion being held that salesmen in their exploitation of given lines of hosiery represent a duplication of effort.

A manufacturer who has gone through the fire points out the futility of undertaking to compete with some mill having a well established trade in a given type of stocking. Let that manufacturer continue to serve his trade, and compete not by duplicating it but by producing a better or more appealing piece of merchandise. Too many salesmen, it is held, consume unnecessary time of buyers; the fewer they are, consistent with good merchandising, the less will they pester the buyer and the better attention will they receive when they do pester them. If, however, a manufacturer has solved the problem of producing a given line at a lower cost than that of the mill having a monopoly of it, then, says a mill chief who speaks from experience, there will be a greater chance of displacing that line with his own than by simply duplicating it without an advantage in lower cost or superior construction.

Speaking of the lowest possible operating cost, the question has been raised whether that is to be attained by employing the single unit machine which knits a complete stocking without the intervention of a topper. Friends of the single unit invention claim for it economy of operation. In the other field, where the legger-footer equipment is favored, it is pointed out that there is no loss of time in the completion of the stocking, whereas in the single unit the legger operation must be discontinued while the foot is being knitted. Of course there is a saving in wages of knitters and toppers in the use of the single unit machine, which perhaps offsets the higher charge for depreciation and any objection that may be raised. It is sufficient to say that there are users of the single unit machine who express themselves as well satisfied as when they were knitting by the more popular process —the legging and footing representing two machines.

Mergers of small mills is suggested by some as a means for reducing the cost of management and duplication. This may have motivated the Bromley interests in Philadelphia in the acquisition of one plant in that city and one in Riverside, N. J., within about two years, giving them a five-mill group which, rated as a unit, appears the third largest in matter of production in the United States, the Rosedale-Chipman combination probably ranking second and the Berkshire Knitting Mills heading the list.

It would be possible to mention some small-to-moderate size full-fashioned hosiery plants that during the slump in prices in March-April, maintained a sold-up condition, operated to capacity and did not have to split hairs to meet competition. Several, in the first week in April, were refusing orders for delivery before Easter. A matter of mill management.



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REPRESENTATIVES IN LEADING TEXTILE CENTERS THROUGHOUT THE WORLD

A Chronology of Developments in the "Ringless" Controversy to Date

THE promoters of the widest possible use, consistent with market needs, of the Kaufman patent 3-carrier device for knitting ringless hosiery appeared to have attained their goal by the middle of April, so far as relates to the number of manufacturers installing the device and marketing their product in conformity with the terms of their agreement with the Textile Patents Corporation, which controls the rights under it, although the patent is owned by Julius Kayser & Co. Although the patent, No. 1,969,307, was not granted until August 7, 1934, The Textile Patents Corporation was able a few weeks ago to report 120 manufacturers licensed to produce and distribute ringless hosiery of the Kaufman patent 3-carrier construction. This, admittedly, was regarded as the completion of a big job, taking into consideration the antagonism to the position of the Textile Patents Corporation taken by manufacturers at the start of contracting for production on a royalty basis.

It will be recalled that when the original form of agreement was adopted by the interests controlling the patent, there was objection to a clause providing for a royalty charge of 10 cents per dozen. Many conferences between what came to be known as the inner patent pool and the outer pool, comprising the antagonists, were held, without bridging the gap that separated the two groups. Eventually the royalty charge was reduced to 5 cents a dozen, but there remained in the agreement a clause that chain stores, chain store buying groups, retail buying groups, resident buying agencies and any buying syndicate directly or indirectly interested or affiliated with the retail sale of purchased hosiery to the consumer are to be classed as retailers.

This clause necessarily aroused the ire of such mills as the Rosedale and the Chipman-Rosedale interests, having a large distribution through quantity buyers put in the class of retailers by the agreement. In fact, one manufacturer, at least, who became conspicuous in the outer patent pool, had built up a very large business through selling to chain stores and buying groups.

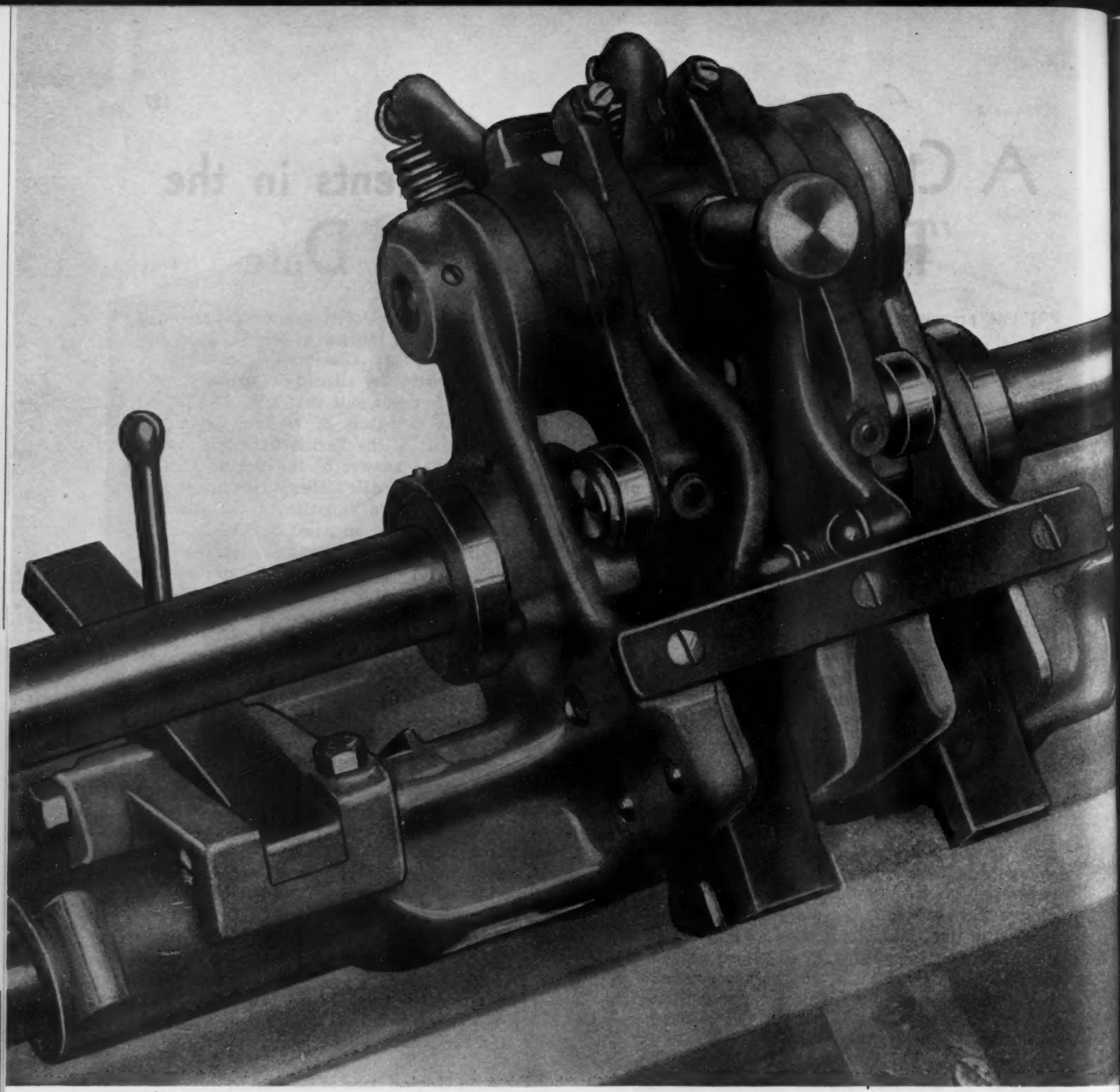
While the battle raged hosiery buyers for the trade taking sides with the outer group demanded protection against loss or damage by reason of actions at law for alleged infringement of the Kaufman patent. In order to meet this situation a bonding company took over the matter of protecting manufacturers so far as indemnifying them against cost of maintaining defense against suits for alleged infringement. About the time this was brought about, infringement suits were filed against the Rosedale Knitting Co. Reading, the Lebanon Mills in Lebanon, Pa., manufacturing for the No-Mend Hosiery Co., and a retailer.

A come-back of the suit against the Rosedale was a counter action charging violation of the Sherman anti-trust law, in that the use of the 3-carrier system was not open to the trade except on a royalty basis. The Rosedale Co. alleged in answer to the bill in the infringement suit that it had sustained serious losses as a result of representation and threats on the part of the Textile Patents Corporation interests. The answer of the Textile Patents Corporation to the Rosedale's allegation of operating in restraint of trade, in violation of the Sherman anti-trust law, was filed on April 9. This was one day before the royalty charge was increased from 5 cents a dozen to 10 cents a dozen for manufacturers applying for license after that date. During the litigation originating with the interests controlling the Kaufman patent a number of additional manufacturers became licensed to use the 3-carrier system, among them the Interstate Hosiery Mills, operating plants in Philadelphia and in Lansdale, Pa. Thus it appears that the filing of suits for alleged infringement and the persistence with which a few manufacturers were selling ringless hose in apparent infringement of the patent, served to stimulate neutral manufacturers to line up with the Kaufman patent interests. There remains adjudication of the patent, which is being hastened by the Textile Patents Corporation, for finally determining the precise status of the ins and the outs. It transpires that during the height of the rumpus over the agreement, not over the patent itself, that some retailers were selling ringless hosiery which did not bear the stamp of the licensed manufacturer. A licensee is required under his agreement with the Textile Patents Corporation to stamp his ringless output with his license number and the patent number.

An Original Bone of Contention

What was a bone of contention from the time the first draft of an agreement made its appearance was a provision that "the owner of the Letters Patent reserve to itself the right, in its sole discretion, at any time after the entry, and during the pendancy of a decree of Court having jurisdiction, holding one or more claims of the Letters Patent valid, to establish for itself and certain licensees under the Letters Patent net selling prices, the net selling prices to retail dealers to be not less than 10 per cent of the minimum selling prices of the wholesale dealers", etc. Some manufacturers professed to see in the price fixing provision a source of possible danger.

In the hope of allaying this fear, Attorney Smith of the Textile Patents Corporation states that while Julius Kayser & Co., owner of the patent, have control of the price fixing, the company is in turn controlled in this respect by the so-called inside group, since "a single sale of hosiery by any member of the



Thousands of READING 3-Carrier Alternating Attachments have been installed by manufacturers of full-fashioned hosiery and are now producing the popular Ringless Stocking. This sturdy, simple and reliable attachment can be supplied for immediate delivery.

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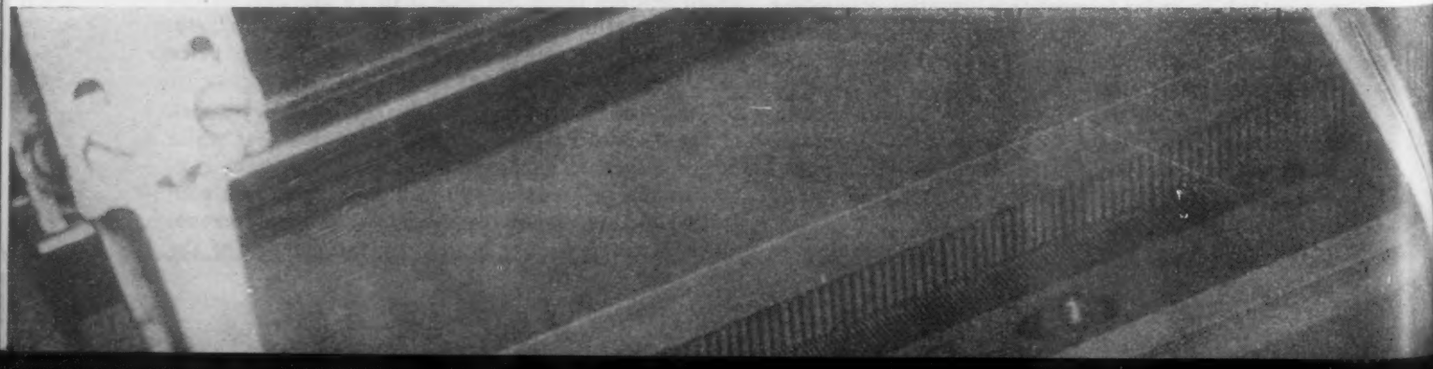

group below the minimum price completely destroys the price-fixing privilege of Julius Kayser & Co. Besides, said Attorney Smith, any licensee may cancel his agreement at the end of any six-months period of its life. But strife continued.

A provision of the agreement with licensees debars them from selling hosiery in the gray to unlicensed manufacturers, some of whom as a result of this clause, were deprived of their usual source of unfinished hosiery. This operated to their discomfort and to a declining business for licensed manufacturers who thus could not longer supply patrons not licensed by the Textile Patents Corporation. This provision proved a wise one from the standpoint of the Textile Patents Corporation, however, for the reason that it brought into their organization some manufacturers who preferred to remain neutral and buy their hosiery in the open market. In fact, there was a declaration by a group of buyers for representative department stores that they would prefer buying ringless hosiery in the open market.

8,000 Machines Reported Equipped

By mid-April, leaving out of consideration the matter of adjudication of the Kaufman Patent, it appeared that the Textile Patents Corp., Julius Kayser & Co., and Charles A. Kaufman, inventor and patentee of the device involved, had scored heavily.

The 120 licensees are said by licensors to have a total of 8,000 full-fashioned machines equipped with the 3-carrier attachment. According to statistics in possession of the Textile Patents Corporation there are around 15,000 machines in American mills, so that the licensees operate more than one-half of the total. While, it is represented, the mills paying royalty control the production of Kaufman patent for making ringless hosiery, there is seen a possibility that successful price control cannot be counted on until after the Kaufman patent has been adjudicated. It is possible, say parties in litigation over use of the attachment, that adjudication may not be obtained until after two to three years of contesting in the Courts.

Following the granting of a patent, No. 1,994,476, for producing ringless hosiery, and its assignment to Alfred Hofmann, Inc., West New York, N. J., by Horace B. Knox, of Belleville, N. J., the patentee, a spokesman for Alfred Hofmann said he expected no conflict with interests backing the Kaufman patent controlled by the Textile Patents Corporation. This was followed by a statement by Attorney Smith of that corporation that "a patent issued recently for making ringless hosiery does not include the basic claims under prosecution in the patent office; that not a single patent has been issued for making ringless hosiery having claims that will prevent the use of various ringless attachments now on the market."

While this is tantamount to assurance there will be no litigation involving the Kaufman and Hoffman patents, there is apparently brewing some trouble originating in inventions for ringless hosiery devices for seamless machines. Such a patent was granted

(Continued on page 141.)

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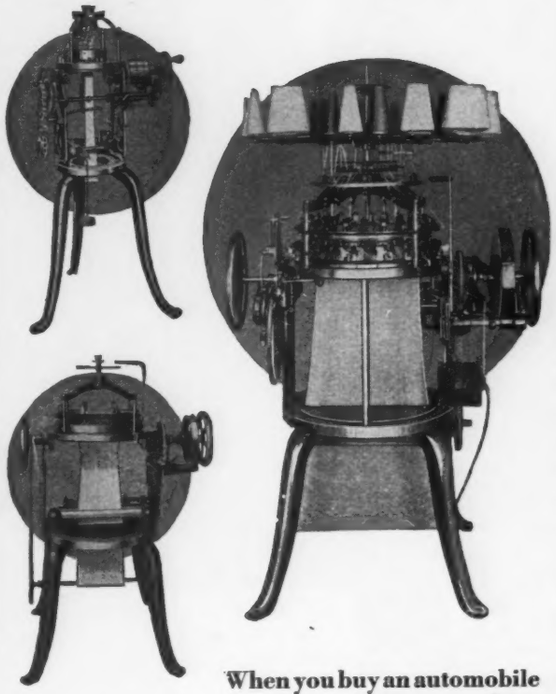

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◆ ◆

WE invite our readers to make use of this department for the discussion of any and all problems arising in connection with the knitting mill from the office to the packing and shipping departments. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. All questions will be answered as promptly as possible. The names and addresses of the contributors must be given, but will be held in confidence and a pen name substituted when printed. All acceptabel contributions other than questions will be paid for after publication. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

◆ ◆

Question on Right and Left-Twist Silk and Using Silk for Seaming Thread

EDITOR COTTON:

In our four-thread full-fashioned number, we have been using a 15-turn silk—right twist. We are now hearing some talk about left twist being better than right twist and would like to see some discussion in "KNITTING KINKS" as to the advantages, if any, in using left twist; and whether the advantages are in the delivery from the cone or in the better appearance of the fabric.

Another subject we would like to see discussed is whether or not there is any advantage in using a silk yarn for seaming instead of a cotton thread. We understand that a number of mills are now experimenting with a silk seaming thread and we would be interested in having the ideas of other mills on this subject.

CONTRIBUTOR NO. 6386.

Runs High Speed on 260-Needle Seamless Machines

Gets good results in production, quality and needle life at 232 r.p.m. on old machines . . . .

EDITOR COTTON:

The subject of the number of machines per fixer on ladies' seamless hosiery, machine speeds, etc., was discussed by "CONTRIBUTOR NO. 6309" on page 125 in your May issue of COTTON. Then, I note that on page 98 of your September issue, the inquirer, "CONTRIBUTOR NO. 6301," replied to the other party, stating that a speed of 225 r.p.m. is slightly too fast and that he thinks that a speed of 210 or 215 revolutions would be much better and would effect a saving on needles, seconds and waste over a longer period.

I note that this "CONTRIBUTOR NO. 6309" states that he is running 150 denier rayon on 260-needle 3½-inch Scott & Williams Model K machines, and that his waste is running 8 per cent. "CONTRIBUTOR NO. 6301", in September, states that if he is referring to waste only, that percentage is entirely too high, but that if by this figure he refers to the total of seconds, thirds and waste, it is better than the average.

We have a section of fifty 260-needle 3¾-inch Scott & Williams Model K machines which are certainly the oldest machines of this type in the South. These machines are running at a speed of 232 r.p.m., and the waste, seconds and thirds combined run 5 per cent or less. The needle breakage will not average more than .35 per dozen. We have a total of 525 Model K machines of 240-, 260- and 300-needle, and our 240- and 260-needle machines are running at a speed of 232 r.p.m., while our 300-needle machines are running at a speed of 212 r.p.m.

About 90 per cent of our production is made of viscose process rayon and our total of seconds, thirds and waste for the entire department does not average more than five to six per cent. If any of your contributors have any doubt as to the honesty of this statement we will be glad to show our reports for the last 10 months.

We have long since realized the necessity of keeping all of the machines in first-class condition and certainly no machine would stand this speed and run with this low percentage of waste unless it were in first-class condition.

We are inclined to agree with "CONTRIBUTOR NO. 6301" that machines will run better at a speed of 210 r.p.m., but we consider the extra production is worth the difference.

The subject of machine speed, needle breakage and the percentage of waste and seconds is a very interesting one, and I would be glad to hear more from your contributors concerning it.

CONTRIBUTOR NO. 6361.

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Combed Sea Island
Mercerized, Gassed Yarn

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Some Methods of Handling Press-Offs From Three Carrier Work

EDITOR COTTON:

This is in response to the question of "CONTRIBUTOR NO. 6364", on page 111 of the March issue of COTTON, in "KNITTING KINKS", relating to the best method of disposing of press-offs on three-carrier knitting.

It is true that press-offs from three-carrier knitting cannot be raveled in the same manner as single-carrier work has customarily been raveled in the past on a coner or Altemus spindle machine. There has, however, been in use a method of raveling three-carrier work which is quite satisfactory.

An Atwood spooler should be equipped with a board running across the top of the machine at shoulder height. This board can be equipped with hooks or clamps onto which welts of the pressed-off pieces are fastened. Each of the three threads in this three-carrier fabric is then spooled, through the proper guides, onto three separate spools. As these are driven by friction, the one having the thread in the last course of the fabric will revolve and ravel the thread to the other side of the fabric. When the raveling reaches the other selvage, the thread will naturally stop raveling and the friction will permit the spool to stop revolving. When this occurs, the next thread, being in the last course, will ravel onto its respective spool which has been held stationary up to this time.

As the raveling of this thread progresses to the opposite selvage, it will in turn stop; the next thread will then ravel on the third spool across to the opposite selvage.

This method results in three spools of yarn being raveled from the same piece of fabric. They can then be coned directly from the spool onto a regular coner.

This practice produces raveled yarn that is as good as that from single-carrier raveled fabric. However, the cost of doing this must be watched very closely in order to prevent a loss which occurs when the cost of raveling exceeds the value of the salvaged yarn. One skillful operator should be able to successfully take care of about a dozen pieces of fabric at one time and thus bring the cost down within the profitable range.

CONTRIBUTOR NO. 6380.

EDITOR COTTON:

I note the inquiry of your "CONTRIBUTOR NO. 6364" in "KNITTING KINKS" for March, page 111, with reference to disposing of press-offs from three-carrier machines.

We probably have a system that is different from that of most full-fashioned hosiery mills. We have no problem of disposing of any press-offs, as the knitters top on these press-offs on a dull point transfer bar while the machine is in operation and the knitter is at leisure. Each legging machine is equipped with three of these bars to make it possible to have a greater amount of these topped-on leg pieces on hand.

Each bar is also properly marked to enable the knitter legger to top on any width stocking and transfer it exactly on a machine without any difficulty. In fact, we always have a great shortage of press-offs due to this system.

However, tops pressed off right after the knitting of the welt, we have reclaimed.

We must say again that we have no problem of disposing of press-offs, because of the method as outlined in this letter.

CONTRIBUTOR NO. 6379.

Let's Figure Percentages Correctly

EDITOR COTTON:

Comparisons of figures are always interesting and generally beneficial, when the figures are accurate and based on the same methods of computation and are applicable to one's own business. Percentages of defects and waste are of vital importance to those engaged in the productive departments of hosiery manufacturing. When these percentages are compared with those of other mills, surprising results are found in many cases. Yet these comparisons may mean little because of different methods used in computing the percentages of defects and waste.

For example, let us suppose that in 100 dozens produced there are (at the knitting machine) 93 dozen firsts, 6 dozen seconds, and one dozen thirds. Mill A figures its percentages on the dozens of firsts made, thus: 6.45 per cent seconds and 1.08 per cent thirds. Mill B figures its percentages on the total dozens produced from the machines, thus: 6.00 per cent seconds and 1.00 per cent thirds. This would put Mill B in an apparently better position than Mill A if the comparisons were made without considering the methods of computation—whereas the actual figures are the same in this particular case.

Furthermore, the matter is complicated by the difference in practices of grading. Perhaps one mill will call all defects "seconds" at the machines, grading them later, whereas another mill might break them down into several classes. Naturally the mill in the first case would show higher "seconds" than the mill which breaks the defects up into classes. This applies whether the knitter classifies or it is done immediately afterward by the inspectors.

When the item of waste is reduced to percentages, there are even more variations. First, some plants include in waste percentages such items as ravels, looper clips, etc. It would seem that this practice is in the minority and appears unsound. Considering waste as that amount of yarn which has been spoiled in the knitting, we find at least three different methods.

Taking the 100 dozen in the foregoing example, let us assume that they are 20-ounce dozens and that 40 ounces of waste is made. Mill A, basing its percentages on the firsts produced, would figure (1): 93 dozen $\times$ 20 ounces = 1,860 ounces divided into the 40 ounces of waste gives 2.15 per cent. Or Mill A might figure, taking all the dozens produced as a basis, 2,000 divided into 40 ounces of waste, namely 2.00 per cent. However, Mill B would take the basis of yarns used for his waste percentage, thus: 100 dozen $\times$ 20 ounces = 2,000 ounces plus 40 ounces of waste = 2,040

ounces; this divided into 40 ounces will give 1.96 per cent waste. This same basis of yarns used for figuring waste percentages leads to another method in Mill C. Here they take the actual consumption of yarns for the period, deduct the theoretical consumption (dozens times weight) and call the figure the waste. It is noted, though, that Mill C figures the percentage by dividing the total consumption into the waste; thus figuring on the same basis of percentages as Mill B, but using an entirely different method by which to secure the figures of waste and yarns used (Mills A and B both weigh the waste when made). This last method is the one recommended by the National Association in its latest book on uniform costs.

Our picture is further confused when passed defects, looper and seamer percentages are considered. One group figures these at the inspector's (gray) and bases the percentages on the dozens inspected. This is more accurate than the other method of figuring what these inspectors find against the actual production. Besides this difference, the same divergent methods are found as in the foregoing illustrations, such as figuring these percentages against total production, firsts only, etc. Some plants, although using the method of Mill B (above) use only the firsts in figuring looper, seamer and passed second percentages. This is not without logic, from the standpoint of percentages of seconds passed, but makes this percentage larger than it should be in figuring against the total production.

In the finishing department, the problem is still further complicated by many different standards of grading, number of classifications, including or not including grey defects found in the same lots with firsts, and omitting re-boards, re-dyes, etc., when figuring defects. Mention of these differences suffices to emphasize the lack of a common basis on which to compare. This applies to both seamless and full-fashioned.

As to which method is best resolves itself into a question of personal opinion, or adaptability to the purpose for which the percentage is used. Mill A would say that they want to be able to take a certain percentage of their firsts in figuring costs, hence they base on firsts only. While it is true that using firsts they can figure 6.45 per cent seconds, they should bear this in mind when considering production. On the other hand, it will be erroneous for Mill B to take the weight of firsts and from that figure their waste cost at 1.96 per cent. Therefore, from the viewpoint of the mills, the main thing is to be sure each knows what it is doing.

There have been in the past many sets of figures secured for comparison but without a standard basis of computation. Hence the accuracy of these comparisons is questionable. There does seem to be a lot of work to be done on this line, perhaps by the associations, perhaps through magazines. Pioneering in standardized costs has been done and some good has been accomplished. If we are to benefit by percentage comparisons, it would seem that pioneering must be done in standardizing methods of computation for that purpose.

CONTRIBUTOR No. 6372.

Helpful Hints on Standard Knitting Machine Fixing

(Editor's Note—This is the eighth of a series of articles discussing the parts of Standard knitting machines and giving helpful, practical suggestions on fixing them. The first article appeared on page 129 of the April 1934 issue and gave a history of these machines. The second article, on page 127 of the May issue, covered the parts shown on Plate I in the Standard catalog. The third article, covering Plates 2, 2A and 3, was on page 105 of the July issue. The fourth article, covering Plate 4 and 5, was on page 101 of the September issue. The fifth article, page 105, November issue, covered Plate 6. The sixth article, on page 107, January 1935 issue, covered Plates 8, 9, 10, 11 and 12. The seventh article, page 111, March 1935 issue, covered Plates 13 and 14.

The numbers in parentheses following the names of parts are the numbers used by the machine manufacturers for the various parts. It is suggested that the reader refer to the plates in question in the Standard catalog in reading these discussions, and that he clip these articles and file them in the catalog with the various plates for further reference.)

Plate 15—Chain Links

EDITOR COTTON:

Many of the every-day troubles which pop up here and there can be traced directly or indirectly to the chain links. They are subject to wear like any other machine part and therefore require a certain amount of attention. Starting, stopping, going on and off the heel and toe, putting lowering picks into action, making yarn changes and numerous other things which the machine must do in order to knit a complete sock or stocking, all depend on the chain links.

In addition to the regular chain links, which are necessary for plain machines, special links are used to operate various devices and attachments. The different links, each identified by a number, are shown on Plate 15, Plate 15-A and Plate 15B.

Worn chain links are very often the cause for machines getting out of time, jamming up and the like. The machine fixer can prevent trouble if he will check over the chain links occasionally. They are just as important as any other part of the machine; they must be in good shape to give good service.

Carelessness in building up pattern chains can cause a great deal of trouble. Using too many or not enough links for a given size is a common fault which many fixers have; the former is usually an accident, the latter, however, is one of the *wrong* ways of overcoming various kinds of trouble, especially if the goods are being knit too tight. Frequently machines will be found running for a whole week with a toe evening link not properly placed, which means uneven corners in looping, and dozens of seconds for the mill which could have been prevented by careful chain building. I do not mean to imply that a good machine fixer will intentionally neglect the chain links in his machines, but I do believe their simplicity is the main reason which causes him to forget that they exist until they actually give trouble.

Plate 16—Latch Ring Lowering Device

The latch ring lowering device on the Standard machine is simple and effective. It is hand operated.

which makes it impossible for the knitter to start the machine without first lowering the latch ring into knitting position. There is no danger of the machine starting up suddenly of its own accord, while the operator is transferring, thus the possibility of injury to the operator or damage to the transfer ring or the machine is eliminated entirely.

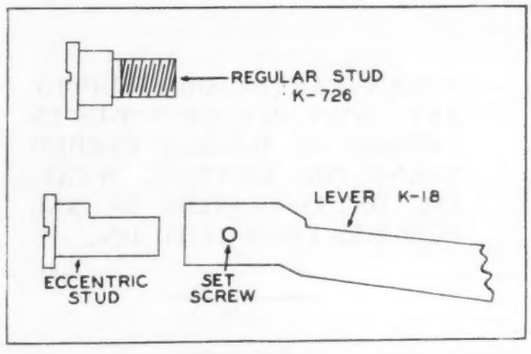
The latch ring lowering device operates in conjunction with the belt shifting mechanism (shown on Plate 17). In starting the machine, power is not applied until the latch ring is down. This feature eliminates many of the so-called starting troubles.

The complete device consists of the actuating arm (K-25) which forms contact with the pivoted lever (K-416), adjusting screw (C-1721), bushing (K-1075) which guides the shaft (K-1078), bracket (K-904), and connecting link (K-1077). Ample places for adjustment are provided and the device does not get out of order very easily.

Chain Ratcheting Mechanism

Once again we find the two outstanding features which have helped make Standard's simple construction and positive action. The various parts are readily accessible and they seldom get out of order. The ratcheting motion is secured from the eccentric (K-650) which is held in position on the main shaft with set screw (C-612). The lever (K-18) is pivoted on shaft (K-608), a fork in the short end of the lever straddles the eccentric (K-650), thus the motion is supplied to the ratchet pawl (K-407) which is pivoted on the long end of the lever (K-18) and rides on the ratchet wheel (K-19). A friction plate (K-622) is provided to prevent the ratchet wheel from moving too freely; the retaining pawl (K-725) prevents the ratchet from backing up. The ratchet pawl (K-407) must make the correct length of stroke or trouble will develop.

No means of adjustment for length of stroke has been provided for the ratchet pawl, therefore when a new pawl is applied it is necessary to fit it. More service can be gotten out of a pawl and the ratcheting mechanism made more flexible by making the pawl



How to make chain ratchet pawl on H adjustable . . .

(K-407) adjustable. This can be done at a very small cost as follows: Remove the screw (K-726) and pawl (K-407). Re-drill the screw hole in lever (K-18) with a drill just large enough to remove the threads. Make an eccentric stud with about ⅛-inch offset as shown in the sketch herewith. Drill and tap a hole for a small set screw in lever (K-18) to hold the adjustable stud in place. A great deal of time and trouble can be saved by making this simple change.

Plate 17—Belt Shifting Details

The general appearance of this device might cause a person who is not familiar with it to regard it as a more or less complicated affair. True, it does have more parts than similar devices on other makes of circular machines, but it does more—therefore the additional parts. As stated previously, part of the latch ring lowering device is used in connection with the belt shifting arrangement, and automatic stopping arrangement which functions when the machine gets out of time is also incorporated. Very often knitters who were trained on other machines will complain that Standards are hard to start. The complaints will vary from sore shoulders, side ache, catches in the side, on down to a stiff neck. All of these complaints are caused mainly by two things: poor adjustment on the lowering device, and operators standing too far away from their machine when starting it. The latter is the cause for more complaint than the former. It must be remembered that the pull on the starting handle is upward; the machine can be started with ease if the operator will stand erect and close to the machine. The various parts of the belt shifting mechanism are all attached to the bracket (K-12) except the stop-off lever (K-10) and connection (K-11). These are mounted on the shifter fork (K-9).

The automatic stop-off lever (K-401) which is operated by the chain links, is attached to the machine frame with stud (K-621). The belt guide rods (K-633) should be kept in good condition. Loose or bent outside rods with the crank handle striking them at every revolution when it is turned by hand are often the direct cause of serious injury to the fixer's hands. Guide rods should be just far enough apart to permit the belt to pass between them freely without twisting the belt. A good belt can easily be ruined (they often are) by guide rods not being spaced properly. Outside guide rods usually work loose more often than inside rods in most cases; this is caused by the crank handle striking the rod while the machine is stopping. Much of this trouble can be overcome by bending the guide rod inward just in front of where the belt passes. Note Plate 17. Bend the rod midway between the arrow pointing to the outside rod and the belt. When the rod is bent properly the end will not strike the crank handle and the danger of injury to the fixer's hands will also be eliminated.

Plate 18

All plain Standard H machines are equipped with yarn racks, bobbin stands and oil wick bottles as shown on this plate. The tension spools (K-735) have been replaced with an eye plate which is attached to the yarn rack like the spools are. Most fixers prefer to have their machines equipped with a spool, with an eye plate like (K-736) on either end of the spool. As a rule, a tube made of rib fabric or felt is slipped over the spool. The tubes are kept saturated with

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OR
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Egyptians (uppers / Sakelarides)

Arizonas - - Pimas

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Warps
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light oil which is beneficial to both the yarn and the needles. Tubes should not be used on spools if yarns are to be run which do not require added tension such as singles backing for rayon plaited numbers. All machines on a given style should be threaded up exactly alike; several different ways of threading on the same style will only lead the operator to believe that it makes little difference how the machine is threaded and therefore leads to trouble. On numbers using silk or silk and rayon twisted for the leg and foot it will be best to use a disc tension in addition to the covered spool. Some fixers use disc tensions on all-mercerized numbers also. Disc tensions will cause the yarns to twist and become tangled between the cone and the yarn rack. The twisting is caused by excessive tension on the discs and takes place when the yarn stops running during changes. Silk, rayon and combination yarns are more likely to become looped and tangled than other kinds. One way to overcome this trouble is to distribute the amount of tension needed by getting part of it from the spool (covered or as is) and the remainder from the disc tension. Under no circumstances should yarns be run through the eye plates (K-736) without having a porcelain eye in them; one day's waste will pay for dozens of porcelain eyes. Keep the yarn racks set directly over the bobbin stand to insure free delivery from the cone to the eye plate.

Oil Wick Bottles

While visiting another mill sometime ago I noticed that the oil wick bottles were in a deplorable condition. Most of them were covered with lint. Some had wicks, some did not, bottles were missing, those that did have bottles and wicks were bone dry. Curiosity prompted me to ask the fixer why, how come, etc. He simply grinned and said "Those things ain't worth fooling with". Do you agree with him or not? Personally I disagree, for the machine builders had a definite purpose in mind when they placed the bottle and wick on the machine. It does pay to keep them in good shape. The bottles should be filled regularly with light oil (lighter than needle oil); the wicks will remain soft for a long time if kept saturated. When two ends of yarn are used for the heel they will often become separated while passing over the wick; one will run over the wick, the other on the side, thus causing an uneven pull on the yarns. This trouble can be overcome by punching a hole in the wick and raising it up so the hole will be higher up than the porcelain guides on either side. A slight amount of tension will thus be added; the yarns will be lubricated and it will be impossible for the yarns to become separated or tangled.

Plate 19

The simple and effective take-up sweep (K-6034) and take-up bracket (K-33) are shown on this plate. The sweep is very light yet sturdy, all side play can be taken out by making use of the adjusting screw (K-1031). A short wire is used for a connection between the rear end of the sweep and the take-up spring (C-1072). The collar (K-39) can be adjusted to give the desired pull on the take-up and spring. A steel eye is used in the sweep and the take-up bracket is equipped with porcelain eyes throughout. A complete disc tension with spring and thumb nut complete the take-up device. The take-up sweep is controlled by the release rod (K-1052) which is attached to the bracket (K-403). The bracket in turn is raised and lowered when the clutch acts.

The Transfer Ring

Sad, but true, many machine fixers fail to give the transfer rings some much needed attention. Keeping transfer rings in good condition is just as important as keeping the machine itself in good shape. Half of the responsibility in regard to care of the transfer rests on the operator, the other half on the fixer. The usual alibi for bad transfers is that the operator is too rough with them, so why waste time trying to keep them in good shape. The best advice I can offer is, fix the operator first, then fix the transfer. There is absolutely no need for an operator to abuse a transfer; yes, it does happen, but the fixer should not tolerate it. The usual fault with operators is that they press the transfer down before all of the needles are in the points and many have the bad habit of revolving the cylinder while the transfer is resting on the needles. Both of these shortcomings will cause bent needles, bent or broken points, damaged sinkers and various other troubles. Many operators spend too much time with a pick-up hook after each transfer; they should spend more time trying to make perfect transfers. The operator who is constantly using a pick-up hook is usually the one who makes plenty of seconds. And, last but not least, it takes just as much yarn, time, and work for the machine to make seconds as it does for good work.

The next article will cover Plates 20, 21 and 22.

MARTIN A. SHAW.

A Seamless Knitting Problem

Here's one that will either be "duck soup" or will make you lie awake tonight—in either case, will be glad to have your answer. Who's right? Why? . .

EDITOR COTTON:

We have just had a rather interesting experience which we had not run into before, and I would like to tell your "KNITTING KINKS" readers about it and ask for their comments.

On a certain style of ladies' seamless hose, we had, of course, a set number of links in the chain. One day the question of lessening the number of links and making a longer stitch, thus lightening the number, came up. Two "old-time" fixers stated that this would not lighten the stocking, but would make it heavier, that is, if enough links were taken out and the same length of stocking made from the same denier rayon. That appeared to be absolutely backwards to me, so I made a stocking on one machine with standard chain and sized it on the standard board to measure 30 inches finished. Immediately, on the same machine, we removed 8 links from the leg and 2 from the foot, sized on the same board to the same length (by lengthening the stitches). Upon weighing

the two stockings in the gray, we found the first was .07 ounces heavier than the second, which confirmed my ideas on this matter.

These fixers stated they had *heavied* numbers by doing the same thing. They are excellent men, know their jobs, and this is the only case where I have found them "off". What I am wondering is where they got that idea and why. Also I wonder if such a belief exists to any great degree among fixers and practical men. Naturally, it seems to me, when the number of courses is cut, then yarn is saved, although the stitches are lengthened, because the connections between the needles are reduced in number; and also there are less actual stitches.

It would be interesting to see what the reaction of your readers to this thought is. I was surprised, as I had never questioned the fact that such reducing will lighten the stocking, and I am still convinced of course that it does so lighten it.

CONTRIBUTOR No. 6381.

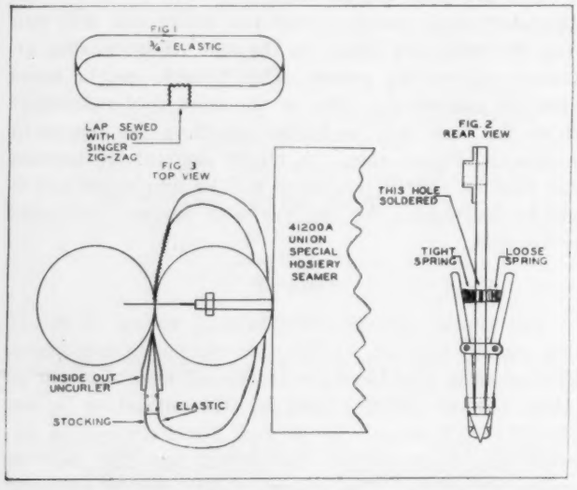
A Method of Attaching Elastic to Three-Quarter Length Hosiery

EDITOR COTTON:

With much interest being displayed in three-quarter length hosiery it may be of value to some mill men to describe a method of attaching the elastic to the boot of the stocking.

We have tried many of the various ways of doing this operation on 300-needle 4-end seamless silk with 10 courses of 10-end at the top of the boot. The following method is the one we have worked out and are now using. It is quick, easy, low in cost, and makes a nice finish.

The elastic is cut in nine-inch lengths and joined by lapping over the ends ⅜-inch and sewing three sides of the lap on a 107 Singer zig-zag machine. (See Fig. 1.) The production on this operation is 11 dozen per hour including trimming of threads. This method is better than butt-tacking or sewing, as the rubber in the elastic cannot pull away from the ends, leav-



For attaching elastic to ¾ lengths . . .

ing a ragged finish where it is joined.

To attach the elastic to the stocking, we use a 41200A Union Special machine fitted with an inside-out uncurler which we have changed as shown in Fig. 2. The hole in the body of the uncurler is soldered up and two springs are used in place of one to hold the sides in place. The spring to the inside of the machine has just enough tension to hold the side closed but not enough to bind the passage of the elastic through the uncurler. The one to the outside of the machine has sufficient tension to uncurl the fabric of the stocking. It is used as follows:

The operator takes a stocking, inside-out, as it comes from the knitting department, and places it in the outside of the uncurler so the top edge of the fabric uncurls on the pins of the uncurler on the left side with the opening of the stocking toward the machine. The elastic is placed in the other side of the uncurler with the lap matching the seam, and inside of the stocking. See Fig. 3. She then sews around the elastic and stocking until the stitching meets the uncurler. At this point she raises the uncurler and finishes the sewing by running it over the starting point about half an inch. In this way the operator is able to stretch the elastic equally all the way around the stocking. The stitch finger on the seamer is set so it takes a bite of about three courses. The feed rolls are set with enough pressure so they will not slip when the operator stretches the elastic. The thread tension is loose enough so that it will flatten out when the stocking is boarded, giving a very even and smooth finish. Our production on this operation is seven dozen per hour per operator.

CONTRIBUTOR No. 6383.

Notes of Interest Concerning A Number of Full-Fashioned Mills

After being operated successfully by receivers in equity since August, 1933, the plant of the Olympia Full Fashioned Silk Hosiery Co., Philadelphia, was formally conveyed by authority of the Federal Court to the Arlington Hosiery Mills, Inc., on March 5. The property embraces a one-story factory building, 18 knitting machines and the usual auxiliary equipment. The purchasers paid $25,000 in cash and satisfied a $40,000 mortgage, subsequently creating a mortgage loan of $25,000. As the bid accepted by the Court was submitted by A. Kommel & Sons, mill agents, New York, it is thought in the trade that the purchase was made for this firm.

* * *

The full-fashioned hosiery mill of the William Brown Co., Philadelphia, idle since July last, and advertised to be sold February 4 under foreclosure proceedings, has been taken over by a committee appointed by the Federal Court under an order issued in response to a petition by the preferred stockholders, the sheriff's sale announced for February 4 having been stayed within 48 hours of the time set for the sale. The plant, besides buildings, comprises 125 machines of 39 gauge, four of 45-gauge and 31 of 42-gauge. There is a mortgage encumbrance of approximately $350,000, including interest.

* * *

The M. B. Berger Co., full-fashioned hosiery, Souderton, Pa., announces preparation for enlarging the factory building and installation of 20 machines.

* * *

Danita Hosiery Mills, Inc., is reliably reported having completed arrangements for installation of 10 full-fashioned machines . The factory is in Cheltenham, a few miles out of Philadelphia.

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THE KNIT GOODS MARKETS . .

Philadelphia, April 16, 1935.

BY THE TIME hosiery manufacturers have reported their net shipments for March it probably will be shown that business during the first quarter of 1935 was in better volume than was commonly believed in the trade, judging from complaints of numbers of mill representatives and hosiery department managers in large department stores. Such a proposal seems indicated in statistics for January and February as tabulated by the Department of Commerce from the monthly reports of manufacturers and by the Hosiery Code Authority.

That prices for, more particularly, women's full-fashioned took a sharp downward pitch was as disappointing to manufacturers as the reported slack buying for pre-Easter retailing, said to have been due primarily to too many mill managements departing from their safety plan of confining production mainly to firm orders. In defense of manufacturers, it can be stated as a fact that they were misled as to near future demand by the near boom in December and early January, and the extent to which buyers placed orders for presumably the Easter shopping period, judging from delivery dates indicated in orders. Cancellations precipitated a scare, and the indicated complacence with which the breach of ethics was condoned by mill managements had the effect of encouraging buyers to pin orders down to current needs and ignore Easter business, in which they may have acted wisely, unconsciously.

A hosiery manufacturer of the old school whose present position in the trade enables him to observe and analyze trends declares that his study of the markets during March and April forces the conclusion that women are less interested in Easter shopping than in recent years; that they have a new deal of their own in the matter of replenishing their wardrobes, and this year went about their shopping in disregard of holidays. They are credited with taking note of department store anniversary sales on a special price basis while otherwise following the practice of retailers in restricting orders to needs as they arise.

This spring's dust storms in the sections of the West, floods in sections of the South, and a top-heavy ratio of radically inclement weather in the northern Atlantic seaboard and middle states obviously put a damper on pre-Easter selling of hosiery, possibly, leaving an accumulation of consumer demand for late spring and early summer, when it may be repeated that "business in hosiery was not so distressingly poor as it was described."

In view of physical conditions which adversely affected retailing, it is held as perhaps not a calamity that some hosiery orders were treated as most of the allies in the world war treat their war debts to the United States. Even at that shipments of hosiery, all classes, in January and February, exceeded those of last year, according to a summary of findings by the Hosiery Code Authority, circulated in the trade by the National Association of Hosiery Manufacturers, and as well by a tabulation of identical manufacturers' reports by the Department of Commerce. The latter accounts for an increase for January-February this year of 1,570,654 dozens over the corresponding months of 1934, this showing being made in reports from approximately 340 manufacturers representing 399 mills. The Department of Commerce uses the term "Net Shipments," while in the Hosiery Code authority report "total" is used, arrived at from a tabulation of data from 622 companies operating 807 plants, or 98 per cent of the production, and accounting for an increase of 2,258,383 for the first two months of 1935 over the corresponding period of 1934.

The Department of Commerce tabulation shows that the 340 manufacturers reporting were left with stocks of 11,700,507 dozens at the end of January this year, an increase of 1,316,667 of the quantity at the end of January in 1934. This was sufficient to weaken the position of operators in the primary markets, and contribute to the slump in prices in February and March, when four-thread silk 42-gauge were sold by at least two manufacturers in New Jersey at $4.65 a dozen. This was an exceptional sacrifice by mills, most of those in the Eastern Pennsylvania and New Jersey territory holding for $5.00 minimum, and getting it. A few mills were closed down when the price dropped below $5. One concern, in Philadelphia, after shutting down on production, reported his actual cost, plus two per cent commission for selling agents exceeded $5.

Net shipments of women's full-fashioned in January-February 1935 exceeded by over a half million dozens the shipments in the corresponding months of last year. As it was demonstrated in mill and retailer sales that April retailing embraced fair quantities of hosiery of the better types, it was assumed in the trade that not all of the increase could be credited to low price goods.

An up-state Pennsylvania plant of moderate size producing high quality 42- and 45-gauge stockings, has maintained since the beginning of the year a sold-up condition while operating the plant to capacity for the code limitation of hours. The same mill, before the NRA reduced working schedules, operated 24-hours a day from Monday mornings to Saturday evenings. The product is sold to retailers at a price designed to net stores a fair margin on sales at a dollar a pair. Another mill in the Pennsylvania rural section, not remote from Philadelphia, while producing for the moderate price brackets, recently added 10 used full-fashioned machines and last month was in the market for an additional ten, while buying gray hosiery from several mills. It appeared that full-fashioned plants in the semi-rural sections were agreeable to the proposal that hosiery business this year was better than word pictures had painted it.

Single-top full-fashioned hosiery distributed by Harrington & Waring is being manufactured on an increasing scale, on a royalty basis of five cents a dozen. A Philadelphia mill is one that is selling capacity production and deliveries are said to be in arrears in some instances. This type of stocking, invented and patented by John M. Botts, is made with an elastic top, and is represented as permitting an additional production of four dozens a day per legger. Thus, as is pointed out by Mr. Botts, there is a less overhead cost.

The Vogue Hosiery Mill, Philadelphia, is knitting a three-thread 45-gauge stocking for the fine division. A one-thread stocking was offered by Wanamaker's as a strictly seasonal item.

Strawbridge & Clothier attracted national attention with a promotion sale of a branded line of silk full-fashioned stocking at one dollar a pair, each purchaser receiving a guarantee that "If they do not give satisfactory service we will replace them with a new pair, within six months of date of purchase." The stockings sold rapidly, necessitating several reorders. They were of chiffons and medium weight service types, both described as ringless.

In the seamless division, net shipments of men's half-hose were about 43,000 dozens greater in February 1935 than in the 1934 month, while production was lighter by around 621,000 dozens. The drop in net shipments and a decline of over 630,000 dozens in orders booked is reflected

in the manufacturers' reports of an increase of 1,049,000 dozens in unfilled orders at the end of February, and, in sequence, an increase of 820,000 dozens in stock in mills.

During the five months ended March 1, 1935, shipments of men's mercerized half-hose amounted to 6,223,434 dozens according to a trade quotation from the statistical bulletin of the Hosiery Code Authority, compared with 3,956,004 for a corresponding period ended March 1, 1934, a gain of 2,267,430 dozens, or 57.3 per cent. This is held in the trade as a good augury for high quality cotton half-hose this year, particularly as the shipments of rayon hosiery during the two periods was 6,370,776 dozens to March 1, 1935, compared with 5,870,453 dozens to March 1, 1934, an increase of 8.5 per cent.

Women's seamless reports to the Department of Commerce for February this year reveal declines in production, new orders, cancellations, net shipments and unfilled orders at the end of the month from February 1934 and an increase of about 75,000 dozens in stock at the month's end. Virtually a like disclosure is made in relation to infants' socks. Net shipments of children's gained around 200,000 dozens while production fell off by more than 300,000 dozens.

Unfilled orders fell off by approximately 445,000 dozens and stocks in mills increased by 145,000 dozens.

Using production, new orders, net shipments, unfilled orders and stocks at the end of the month, for comparison with February 1934, women's full-fashioned seem to have come through February 1935 with less cause for manufacturer complaint, except on the question of price, than almost any item in the seamless division. Yet in an organization of full-fashioned hosiery manufacturers the question was raised, "why will any of us keep on running our plants when we confess we cannot sell our production profitably. and accumulate goods that may show heavy loss?"

The ramifications of the break of around $1.50 a bale in cotton on March 11 in its effect on the cotton goods markets was perhaps more clearly emphasized in knitted cotton underwear. There had been a rumbling of disturbing reports for some time before cotton tottered. That seemed to climax the untoward position of buyers for the trade. The situation veered more sharply in their favor with widespread effort for bringing organized pressure to bear for disposing of questions hinging directly on the cotton processing tax.

Ailments of the underwear market as discussed last month by manufacturers, jobbers and retailers could be ascribed to the break in cotton and the rumpus over the processing tax. For the time, a condition probably not paralleled in the history of making and marketing underwear, gave buyers of heavy weights, men's more particularly, a pretext that admitted of no argument as to its genuineness, for deferring their orders to another time.

As favoring buyers in their stand, production of knitted underwear in February increased to 1,525,262 dozens from 1,502,216 dozens in January, while new orders in February declined by 181,929 dozens from January and stocks in mills at the end of February were larger by around 33,000 dozens than in January.

Manufacturers of heavy weight lines for men appeared to take a philosophic view of the situation, virtually leaving it to distributors to take chances with very late orders and price revisions that seemed likely to be effected with final decisive official action on continuance, discontinuance or modification of the processing tax. That there should be an increase in production of heavy weights while light weights declined muddled matters the more.

Increasingly greater interest in men's shorts is focused on the somewhat recently introduced type exploited with considerable success as "jock shorts," and mills are, mostly, well engaged, according to off hand statements by sellers' representatives. But shorts have been cheapened, to the end that numbers designed to sell for 25 cents at the counter are priced six cents less in some of the chain stores. This disturbing development at once suggested a change in style by which the 25 cent price might be restored and maintained, leaving the 19 cent shorts to distributors not averse to pushing the low end goods.

One type of shorts is headed for the outcast list, by reason of reports gaining circulation that some mannish men regard them too effeminate for male consumption. A manufacturer commenting on the man's summer weight underwear, which he describes as lingerie, says it appears to him that men are getting to be as finicky as women in their choice of underthings. There is one thing to be said in favor of cotton shorts, observed the manufacturer, from up-state Pennsylvania where the new type is slow in being recognized by mill men: "They require so little cloth that the price will not be affected one way or the other by doing away with or increasing the processing tax on cotton."

Reports for February showed a modest increase in production of rayon underwear over January. Men prefer cotton to rayon for wear next to the skin, it is stated by men's shop operators, several of whom are quoted as predicting that with cotton processing tax removed and the difference in cost, insignificant as it would be, passed to the consuming public, an increased use of cotton underwear would be shown.

A Chronology of the Developments in the "Ringless" Controversy to Date

(Continued from page 129)

in Canada some months ago, to Paul Krenkel, a Philadelphia inventor, but has not been issued in the United States. Interests connected with the Textile Patents Corporation have, however, on file in the United States patent office a machine patent application and a fabric patent application, for making seamless ringless hosiery, and it is admitted among ringless patent interests that "it appears controversies will arise in the commercialization of the seamless ringless as in the full-fashioned."

That there may be a new crop of controversies over ringless hosiery inventions seems indicated in a letter of C. R. Henderson, president of the H. R. H. Silk Hosiery Mills, Inc., Moberly, Mo., in which he declares "his company has its rights so protected in the U. S. Patent Office that it has reason to believe it will have control of the 3-carrier method as applied to the manufacture of ringless seamless hosiery."

Litigation arising in a multiplicity of inventions of devices for knitting ringless hosiery has already involved more mills and caused more confusion in the full-fashioned hosiery industry than could be traced to the patenting of the pointex heel. The somewhat recent introduction, in a New York department store, of a rayon stocking exploited as ringless appears to be receiving less attention that the very strong probability of ringless silk seamless hosiery coming on the market in a large way as a competitor of the ringless full-fashioned.

REVIEW OF THE YARN MARKET

Philadelphia, April 16, 1935.

FOLLOWING several successive advances in cotton registered on the leading exchanges, carded yarn interests gave prices an upward twist this week. Several of the local commission houses were advised by Southern spinners of an addition of a half cent, putting 10s single on cones in a range 26½ to 27 cents. This compared with quotations of a half cent lower in the previous week, and marked an increase of a full cent over the ruling prices in March for good average quality.

Increases in carded yarn were in strong contrast with the local situation in single combed peeler. Sales had been improving with increasing popularity of recent new types of underwear described as jock shorts, yet some sellers yielded to manufacturer pressure for recessions from previous ratings. Sale of 36s single combed peeler was consummated on a compromise price of 40½ cents, at a time when some concerns were quoting 41 and holding 38s for 43 cents, and others reporting arrearages in deliveries of combed to the underwear trade.

Widespread agitation of the processing tax controversy kept the yarn trade in a nervous state for at least the first half of April. Dealers still were recuperating from the shock incident to the memorable break in cotton on March 11. It seemed a favorite pastime of buyers for mills to make comparison of sale reports for quite recent weeks with those of earlier periods, when volume of shipments compensated in some extent for thin returns on sales per unit. Comparisons recalling better days have necessarily had a depressing effect on the yarn distributing trade. Quibbling over a difference of a quarter of a cent separating buyer and seller negotiating sales became exasperating.

While there may be said to be "definite confusion" in the yarn trade, and no distinctive trends, knowledge that there remains a good deal of business in underwear specifically and cotton goods in general to be placed before the end of spring has been a tonic for hope of improvement in May. In the absence of indicated trends and possible delay in disposing for a time of the processing tax controversy, there has been virutally no advance business in yarns.

As has been repeatedly represented, yarn and goods interests are maintaining an attitude toward commitments for deliveries while harboring hope of removal of the tax, yet realizing that the Washington administration is not favorable to such a proposal. The trade seems sandwiched between hope and fear, and sellers themselves were known to admit they did not have the courage to press for purchases of yarn for other than bare known needs.

Confusion as it existed in the yarn trade during the first half of the spring of 1935 will, it is feared by some commission merchants, be a more serious matter and more difficult to wrestle with in the event the tax be discontinued, for, it is suggested, adjustments that would be expected by consuming interests, and justifications granted in hundreds of instances, would tax patience more than anything else that has occurred in the life of NRA.

"Should it come to a pass where we would have to consider adjustments," said a veteran yarn trader, I would estimate that we would be able to do so to the satisfaction of 75 per cent of our customers, if they faced no controversies with their customers. Friction between our customers and their customers probably would develop a 50 per cent resistance to any reasonable terms that might be proposed, and the retailer might tear his hair and go into hysterics over adjustments, few of which could be negotiated."

The yarn markets seemed to be bolstered at times by inquiry from potential buyers. Contracting, and even buying for spot delivery has not measured up to inquiry. In the circumstances, dealers had been experiencing much difficulty in preventing a sliding in prices, and it is regarded encouraging, therefore, that slight upward revisions have been announced, as a forecast of spinners either selling their yarn on a basis of some sort of profit, or holding on pending development of demand.

Excepting plushes and pile fabrics, the weaving trade has been drawing only very small quantities of yarn through Philadelphia distributors. Sale of 20s/2 carded was effected quite recently at 30 cents. This was followed by the spinner notifying the Philadelphia representative of an increase to 31 cents. Business in 30s/2 carded for the weaving trade were reported this week at around 34½ to 35 cents.

Philadelphia yarn houses selling in wide territory found a deficit of orders from underwear manufacturers in up-state Pennsylvania, up in the Mohawk Valley and in Massachusetts. If underwear output shall be normal this year, it would appear there is in the foreground considerable business in combed and carded knitting yarns.

Fair weights of mercerized yarns have been moving during the processing tax agitation, indicating better volume, relatively, than gray yarn, combed and carded. The hosiery trade is reported as a steadily increasing consumer of combed yarns.

Worsted yarns have weakened in spots in the past month. On several counts of knitting yarns prices went so far below cost that a few spinners have been able to sell at slight increases. Sweater and bathing suit yarns were draggy in the March-April trading despite the fact mills were well engaged on bathing suits, aiming to complete their production season by late May. It is maintained by spinners and not doubted by knowing ones on the sidelines that worsted yarns are selling at a loss to spinners. A recent price for 2/20s, quarter blood, was 77½ to 80 cents, little yarn fetching 80, or 20 cents above wool top; and the top used in such yarn is a product of wool costing topmakers 50 cents and more a pound.

REGARDLESS OF THE METHOD··

You can get

CLEANER FLOORS

AT *Less* EXPENSE

but you can't do it with ordinary soap or abrasive cleaners. Soaps merely spread oil spots over a wider area and leaves a film that catches and holds additional dirt and lint, not to speak of the accident hazard of slippery floors. Abrasive cleaners leave dust.

Thoroughly clean floors can now be secured with the least expenditure of time, labor, money and water with an ordinary mop aided by

DIRTKILLER COMPOUND

which efficiently loosens both dirt and oil, right down to the bare wood, without scrubbing. It does not raise the wood grain like strong alkalies nor grind the surface like abrasives, but leaves a perfectly clean floor—a dustless, non-slippery, hard surface that does not catch and hold dirt and lint.

This perfected compound is also valuable for brightening and cleaning painted woodwork, furniture, windows, machine parts, machinery, concrete floors, etc. It is not only quick and efficient but economical and harmless.

Samples gladly sent to any mill on request. Ask for details and prices today.

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Laurel products will help you secure better processing results. Each one has been developed to fit the process and the fiber. Let our Laboratory assist you in your problems.

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Kali **SERINOL "C"**—For soaking hosiery tram for direct knitting and three carrier knitting.

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HYDROXCENE for treating Rayon for crepe filling. Produces a wonderful pebble and hand, releases quickly and easily in hot water.

HYDROXY SIZE. insures good weaving and greater production. Is easily removed by the dyer without punishing the fabric. Ideal for Acetate, Viscose and Bemberg.

SULPHONATED OLIVE OIL for the finishing plant. Made from olive oil—no adulterants.

ALL TYPES OF FINISHES for the Hosiery, Rayon, Cotton and Woolen industries.

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Manufacturing Chemists
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METSO GIVES A REAL WHITE

YOUR skilled eye sees the increased whiteness of the cloth boiled with Metso, kier assistant. Mill superintendents say that Metso gives them the best white they have ever seen.

And the difference between boils, with and without Metso, can be measured. The whiteness tests invariably take a jump.

For increased whiteness and a better "hand" use Metso in your kiers.

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IMPROVE RESULTS - LOWER COSTS

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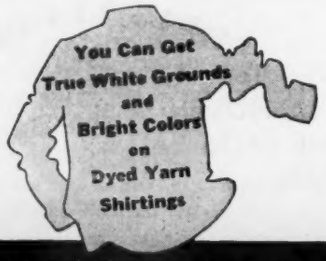

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REG. U. S. PAT. OFF.

Bleaching dyed yarn shirtings with a peroxide solution made up from SOLOZONE (Du Pont Sodium Peroxide) is a sure way of getting the true white grounds . . . full brightness of color . . . that mean a satisfied trade and profitable operation.

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Write to the R & H office nearest you for further details on this low-cost way to high-quality cotton bleaching.

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It Boils Thin! Has More Penetration!

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A NEW BEAM WARPER

DRIVEN DIRECT FROM BEAM HEAD

For All Synthetic Yarns and Fine Count Cottons

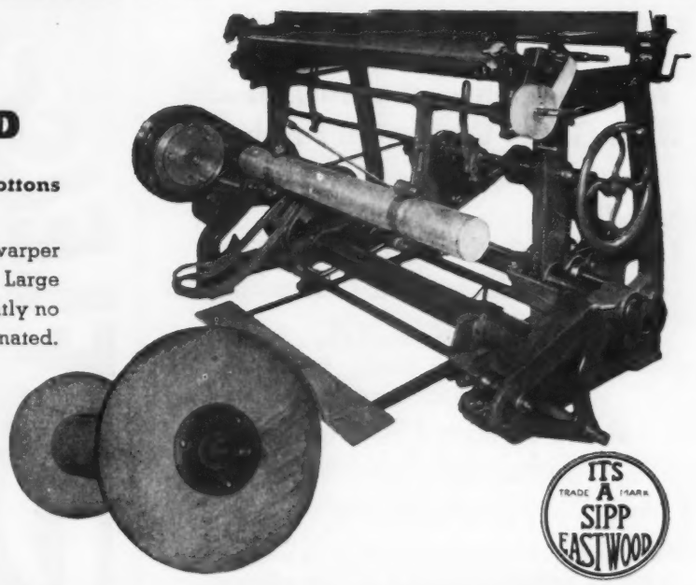
HERE are a few salient features of this new warper —It drives directly from the beam head. Large presser roll is eliminated. There is consequently no distortion of the yarn and shiners are eliminated.

The fact, too, that the beam is driven directly from beam head permits more efficient braking without strain on the yarn. The brake can stop the warper in 1¼ feet from high speed.

Heavy construction. There is absolutely no backlash.

A multiple disc clutch is employed. An automatic movable reed is another special feature.

This new beam warper produces better warps. Write for full details.



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Manufacturers of high-speed warpers, overend cone creels, oilless bearing winders, redraw frames, quillers, re-beamers, edge warpers, tensometers, densimeters, and static eliminators.

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An excellent, willing combination for every bleacher

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For Acetate Silks—

CAMACYL FAST COLORS

A complete line of colors for Acetate Silks, featuring tinctorial strength, fastness to light and washing, and at prices representing excellent money values.

The CAMACYL line gives a comprehensive range of colors for dyeing any shade on Celanese or Acetate Silks. Choose from 36 colors, including Blacks, Yellows, Oranges, Reds, Cerise, Blues, Greens, Violets, Heliotrope, Brown and Navy.

● *Write for CAMACYL COLOR CARD showing colors on five fibre material with effects on wool, silk, rayon and cotton.*

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High Grade Castor Oil Products
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a superior assistant for Beam, Spool, Bobbin and Package Dyeing.

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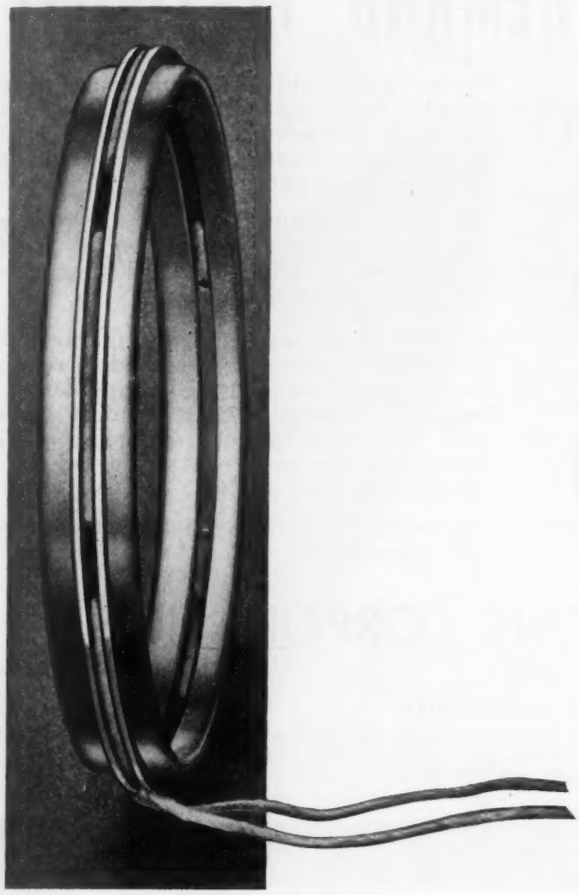

A Ring with a Tale

THE story of the DIAMOND FINISH Eadie ring can be told in three words: "Hundred Percent Lubrication." The patented Eadie delivery of oil to the flying traveler is by far the most effective design for twisting cotton, silk and rayon. Available in sizes from 1½" to 8¼". Install a trial frame and note the immediate improvement in production.

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Southern Representative: WALTER L. NICHOLSON, 2119 Coniston Place, Charlotte
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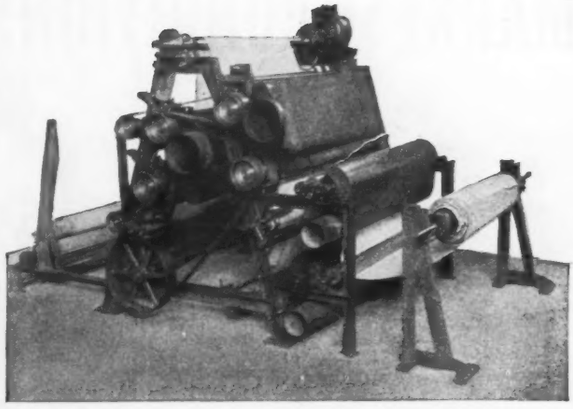

For Low Cost Trimming Use The New AE Shear

The new Hermas AE shear—shown with brush and rolling attachment—assures low cost trimming for all types of fabrics. It removes ALL hanging strings, loops, floats, etc.

Like other Hermas shears it will cut clothroom costs $72 to $220 a week.

It is economical in other ways. The AE shear is sold at the lowest price at which a 4-knife automatic has ever been offered to the textile industry.

The up-keep is slight—and so is the power consumption—an important item — for it is possible for power costs to be so high that the economies effected by the use of a shear are wiped out in increased power consumption.

Used with your present brush and rolling equipment the AE makes an ideal combination brush and shear.

It requires a minimum of floor space.

The AE machine has a greatly improved automatic. No matter how close together seams may come it will never cut a seam.

If you are interested in maximum clothroom results at minimum costs write today for descriptive folder and prices.

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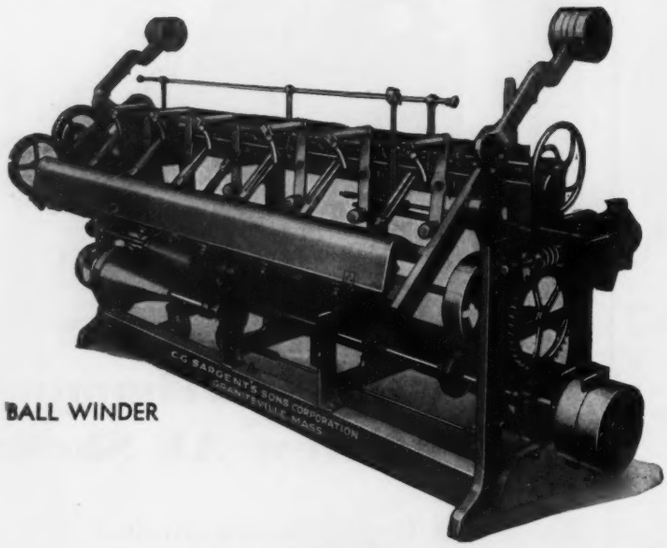
MARKET CONDITIONS DEMAND FLEXIBILITY



BALL WINDER

Sargent's Ball and Card Winders are so constructed and designed that with few adjustments these machines are rendered capable of winding various types of material into many different packages.

The machine pictured will wind in ball form tinsel, wrapping twine, cotton or woolen yarns, knitting silk, thread, wicking, hemp, jute, paper twine and ribbon.

In these times of changing markets, the manufacturer must be prepared to readjust his machinery to meet the varying demands. Sargent's Ballers and Card Winders give the mill owner a distinct advantage,—a few minor changes and he is well fitted for an entirely different market.

The flexibility of this equipment is a feature every prospective buyer should consider.

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PRODUCTS

CAUSTIC SODA
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Solvay Caustic Soda is made from Soda Ash manufactured by the Solvay Process. The same high degree of technical supervision and the same scientific methods are exercised in producing Solvay Caustic Soda that are followed in making Solvay Soda Ash—the standard since 1881.

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LAPPINGS and BLANKETS for PRINTING MACHINES

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For Best results in Sanforizing use

KENYON'S ENDLESS WOOLEN BLANKETS

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Silk and Rayon Weavers Welcome This New U S Unit Tension!

Here is the perfect controlled tension for weaving silk and rayon in *box or shuttle-changing looms!* The U S Unit Tension assures the same tension in every shuttle—means better cloth—more production—no loom stoppage to replace worn pads, mops or felts. The combination of the U S Unit Tension and U S Hand-threading Eye eliminates the need of shuttle hooks—makes threading easy and quick—*saves half the weaver's time.*

Try the Unit Tension in Your Plant—Write, Wire or Phone the Nearest U S Sales Representative

U S BOBBIN & SHUTTLE CO.

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Branches: Providence, R. I.; Lawrence, Mass.; Philadelphia, Pa.; Monticello, Ga.; Charlotte, N. C.; Greenville, S. C.; Johnson City, Tenn.

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Replace your old cam and crank shaft spur gears with our special

SPIRAL GEARS

MANY mills are reducing the cost of head gear replacements by the use of West Point spirals. Complete surface contact is more nearly attained, permitting higher tooth pressure and consequently less breakage. Due to smoother operation, there is less shock transmitted to other moving parts of the loom.

WEST POINT FOUNDRY & MACHINE CO.

(Batson-Cook Company, Owners)

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Manufacturers of textile machinery repair parts, loom beams, beam heads, beam barrels, gears, special machinery

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TO PROMOTE THE GENERAL WELFARE OF YOUR ORGANIZATION

Through the PROVIDENT PLAN, Employer and Employe in the Textile Industry may join together for the best interests of both in a general welfare program. The Employer, by lending the influence of his corporate buying power, makes it possible for the Employe to purchase Accident, Health and even Life Insurance protection at low wholesale cost, on the easy pay plan and without medical examination.

This insurance is the worker's safeguard for his family and himself against loss of earning power and the added expenses incidental to disability and death.

The PROVIDENT PLAN offers to employes buying in a group a form of insurance coverage which cannot be purchased by them as individuals in the open market at such low cost, and which many in the group might not be able to purchase at any price.

The PROVIDENT PLAN embraces in one combination four major forms of insurance protection for the working man:

1. ACCIDENT AND HEALTH INSURANCE to protect his earnings against loss by reason of injury or sickness;
2. HOSPITALIZATION for himself and also for all dependent members of his family with surgeon and operation fees included;
3. LIFE INSURANCE for the care of his family in the event of his death from any cause; and
4. FAMILY BURIAL FUND for deceased dependent members of his family.

A proposal for applying this plan to the needs of your particular operation will be cheerfully submitted without obligation.

THE PROVIDENT LIFE AND ACCIDENT INSURANCE COMPANY

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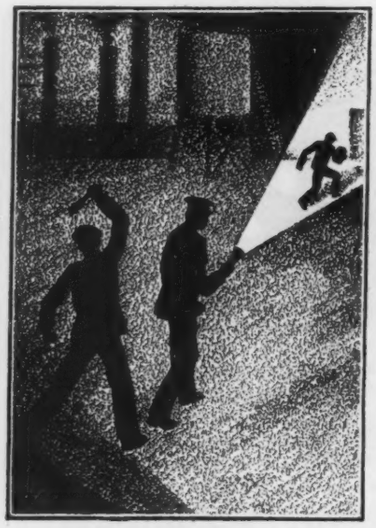

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HE HAS ONLY 2 EYES/

How about those remote corners of your property—the points of easy access—can your watchman "police" those lines? FENCE CAN!

A sturdy Stewart Non-Climbable Chain Link Wire Fence stands as a vandal-proof watchman protecting ALL points 24 hours a day. The cost of fencing is but a fraction of the value of the protection it affords.

Write for a catalog and the address of your local Stewart Representative. He will gladly give you estimates and information regarding the features to be considered.

THE STEWART IRON WORKS COMPANY, Inc.,
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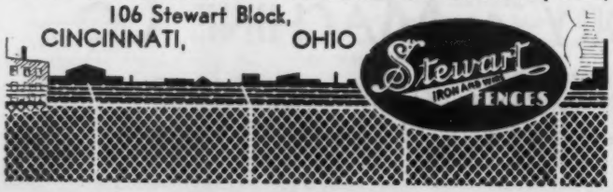

"Smoother than Grease" Since 1890

20 years without a drink—

ARGUTO OILLESS BEARING CO.

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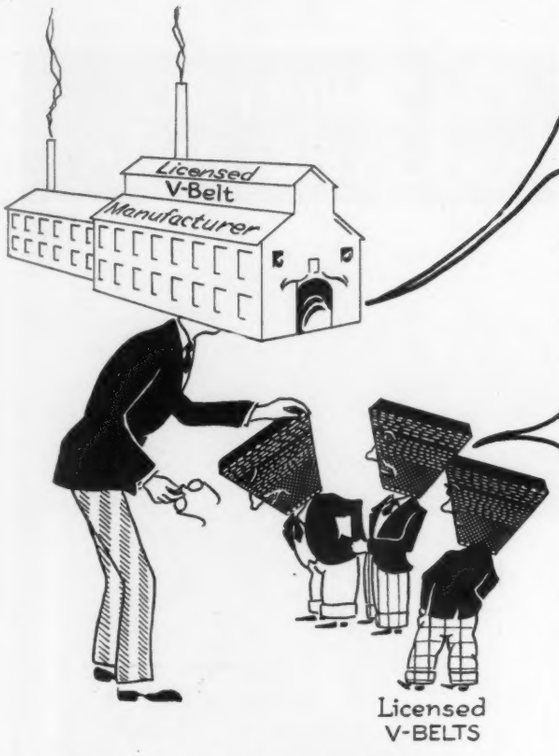
No More Secrets

The Audit Bureau of Circulations was formed by large advertisers and publishers to put a ban on circulation secrets. Publications willing to have their records checked by impartial auditors belong to the Bureau, and the number of papers they sell is published to the world. No one doubts the "A. B. C." report. It eliminates unknown quantities.

COTTON

ATLANTA, GEORGIA



Well boys, I've done for you all I know how. You're on your own now.

I hope you may prove a credit to our house by giving useful and efficient service wherever you make contact.

Okay, Dad. We know we can deliver if we contact, from the start, the proper companions. By such, we mean Goldens' V-Belt Sheaves. Those boys are all right, and we don't mean may-be.

They can be classed as "Finished Products of a 53 yr. Old School," and when they leave as such they are in the pink of condition and "rarin" to go.

They are wonderful physical specimens, and splendid fellows to run around with.

It will take the best that is in us to keep up with the pace they set.

Goldens' Fdry. & Mach. Co.
LICENSED V-BELT SHEAVE MANUFACTURER
Columbus, Ga.

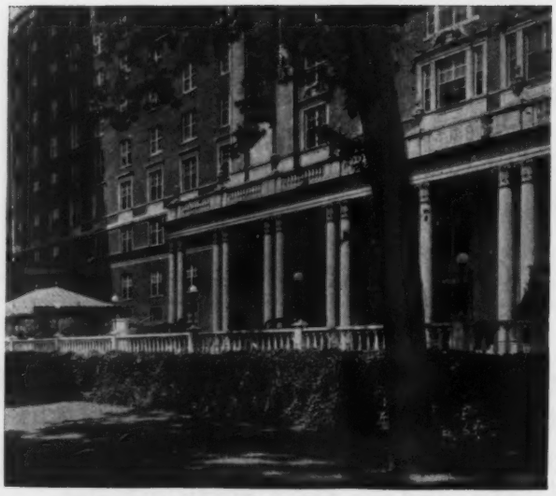
Is "Dirt" on Your Pay Roll?

Mopping mill floors in a vain attempt to get them clean is like putting dirt on your pay roll. Either you are paying for cleanliness and not getting it . . or if you are getting anything like clean floors you are paying far more than you need. This FINNELL Combination machine scrubs the floor clean and picks up the water in one operation. With it, half your present mopping crew can get your floors really clean—not streaky or partly clean. No mop splashes or slippery floors. Ask for a free demonstration in your mill. Address FINNELL SYSTEM, INC., 1305 East Street, Elkhart, Indiana.

FINNELL
SYSTEM OF FLOOR MAINTENANCE

Ask for Details of Our Rental Plan

More than likely you can save enough with this FINNELL machine to pay for having it in your mill—by using our new plan of leasing. Write for details, being sure to state the size of your mill and full details of present cleaning methods.



The Most
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When Textile Men leave for Atlanta, they usually say, "You can reach me at the ATLANTA BILTMORE". It is indeed an address of distinction! Besides the prestige, this is HEADQUARTERS and the general meeting place for Textile Men, bankers, manufacturers, and other business leaders.

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FROM the practical side, the ATLANTA BILTMORE is located within only 5 minutes by taxi to all railroad stations and any part of the business district—yet IT IS OUT OF THE NOISE DISTRICT.

It is so located, and built, that there is every tendency and possibility for relaxation: Comfort—quiet—trees—flowers—an atmosphere of refinement. Golf privileges at leading clubs.

Every room, too, has its many conveniences and advantages—each is of outside exposure; each has private bath and circulating ice water.

Excellent food by a chef of renown. ONE DAY laundry service, without penalty of extra cost, and numerous other features that assure full satisfaction—*and your return!*

Single rooms, $3, $4, $5; Double, $4.50 to $7.

MAIN DINING ROOM:	COFFEE SHOP:
Breakfast from 40c;	Breakfast from 30c;
Luncheon from 75c;	Luncheon from 40c;
Dinner from $1.00.	Dinner from 60c.
Also a la carte	Also a la carte

Atlanta

BILTMORE

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"The South's Supreme Hotel"

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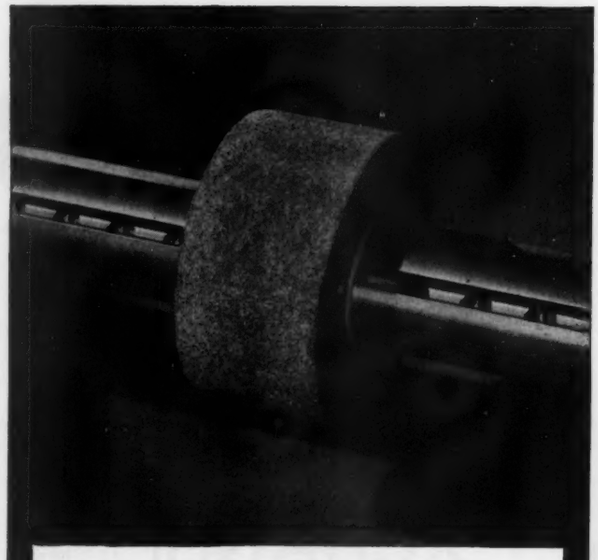

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FOR
EVEN SPINNING AND TWISTING
VERTICAL NE-BOW TRAVELER
FOR
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THE ORDINARY WAY Posts are jammed into rough holes dug in the ordinary way. Foundation is wider at top. Frost gets under shallow concrete footing, "heaving" posts upward.

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City..... *State*.....
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INDUSTRIAL ENGINEERS

Specialists in Textile Costs Over 22 Years

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COTTON, Grant Bldg., ATLANTA, GA.

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Advertising in this section produces results at small cost. Note the rates above and tell us what you wish to advertise.

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The high speeds and overtime running of present-day textile mill operation is hard on many parts of textile mill machinery. Unless such parts are built to "stand up," upkeep costs will shoot upward. Then too, a broken part at a rush period may mean a serious loss of production.

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Prices gladly quoted on any textile part without obligation.

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BOILERS KIERS
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STAND PIPES
SMOKE STACKS
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FABRICATORS OF STEEL AND ALLOY STEEL PLATE

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now offers fence of
STAINLESS STEEL

● PAGE was America's first wire fence. PAGE was the first to offer chain link fence of rust-resisting ARMCO Iron. PAGE was was the first to provide chain link fence of ALCOA ALUMINUM.

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OF Veeder-Root PICK COUNTERS

Some of these features safeguard the counter's long and trouble-free life. Others contribute to its accuracy... assure the recording of the weaver's *entire* production... reduce the cost of installation. They sum up—in the latest Veeder-Root model—all the inventions and refinements which Veeder-Root engineers have made in building the more than 400,000 pick counters installed since they devised the first one back in 1907.

***Every one* of these 14 is an *essential* feature... one you would insist on having in any counter you'd trust with the job of clocking loom production. Take even one away and you would not get Veeder-Root performance.**

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HARTFORD, CONN. GREENVILLE, S. C.
BOSTON PHILADELPHIA MONTREAL LONDON

BUILDERS OF COUNTING DEVICES SINCE 1878

1648

To You...

and You...

and YOU...

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A Lead to Finer Finish

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REG. U. S. PAT. OFF.

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ROYCE CHEMICAL COMPANY *Chemical Manufacturers*

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